"... Subtopia is inevitable. Modern civilization, mass production and means for sprawl must inevitably lead to the complete disappearance of individual landscape. It's the will of the people, it can't be stopped. . . ."

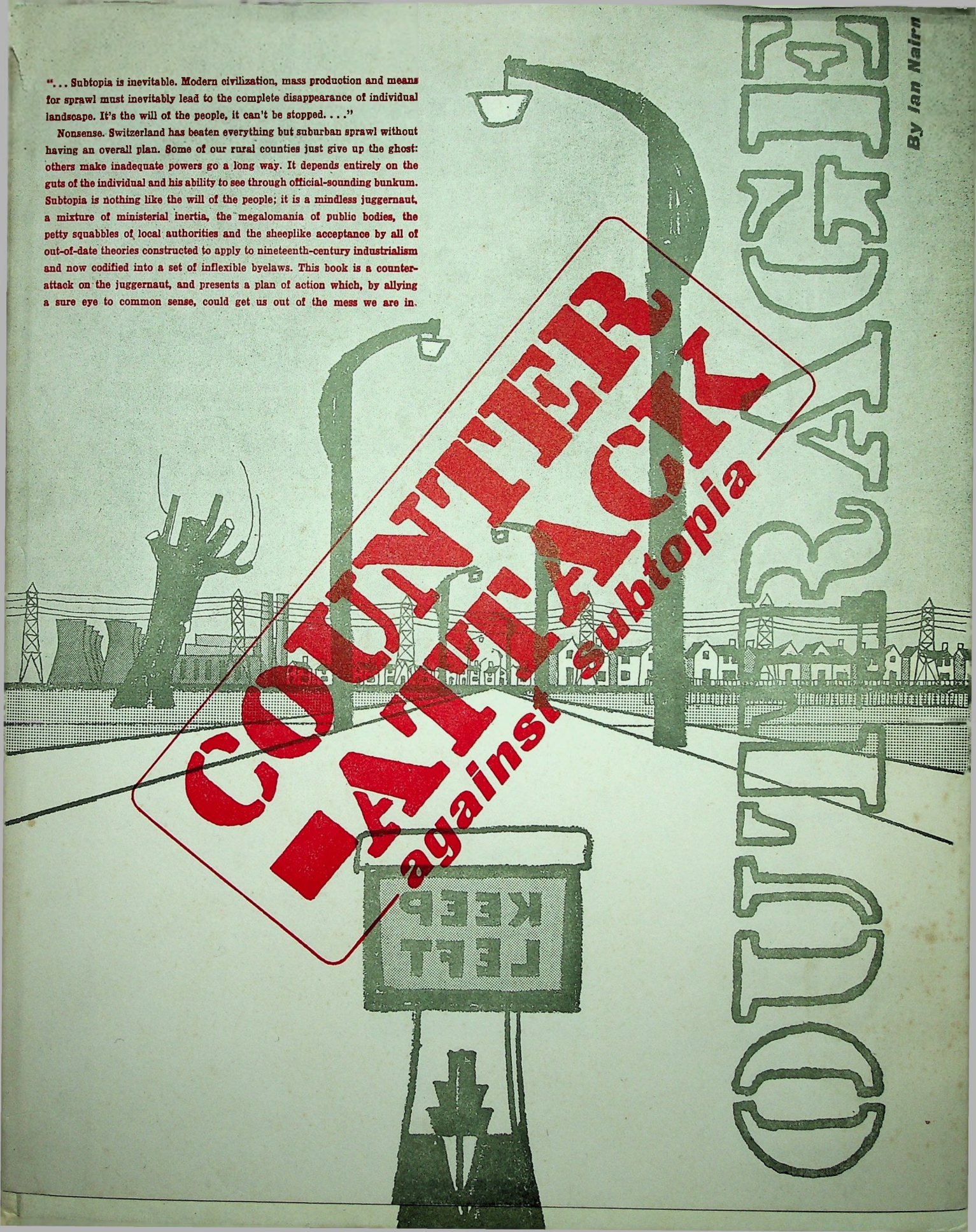
Nonsense. Switzerland has beaten everything but suburban sprawl without having an overall plan. Some of our rural counties just give up the ghost: others make inadequate powers go a long way. It depends entirely on the guts of the individual and his ability to see through official-sounding bunkum. Subtopia is nothing like the will of the people; it is a mindless juggernaut, a mixture of ministerial inertia, the megalomania of public bodies, the petty squabbles of local authorities and the sheeplike acceptance by all of out-of-date theories constructed to apply to nineteenth-century industrialism and now codified into a set of inflexible byelaws. This book is a counter-attack on the juggernaut, and presents a plan of action which, by allying a sure eye to common sense, could get us out of the mess we are in.

COUNTER ATTACK

against subtopia

OUTRAGE

By Ian Nairn



AGAINST SUBTOPIA

By Ian Nairn

This is the sequel to 'Outrage' published in 1955. It shows how a few people in Great Britain and many more on the Continent have overcome the problems, so frequently called insurmountable, of bringing modern life to terms with the landscape. It is certainly easier to represent them as insurmountable if you don't want to spend time and energy on overcoming them, and we believe that this is very often what is happening. Inertia and complacency have dulled the efforts of the very people who ought to be thinking and working hardest - not the planning officers, but the committees that control them and the ministries above them. It is easy for them to represent as public apathy what is in fact public helplessness: this book aims to arm the public with arguments against the wrong way and examples of the right way of doing things. Hence it is called Counter-Attack: and hence - as we believe that the fate of British landscape is in the balance - it is as outspoken and uncompromising as its predecessor.

THE ARCHITECTURAL PRESS, 9-13 Queen Anne's Gate, Westminster, S.W.1

CONTRIBUTORS

Peter Shepheard, born 1913, Liverpool School of Architecture, then assistant to Derek Bridgwater 1937-40. Ministries of Supply and Town and Country Planning 1940-47, deputy chief architect, Stevenage New Town 1947-48. Since 1948 in private practice (Bridgwater and Shepheard). *Geoffrey S. Kelly*, born 1916 in Dublin. Trained Birmingham School of Architecture. 1939-46 with Royal Engineers in France, Middle and Far East. Now partner in firm of John B. Surnam and Partners, Birmingham. *Walter Manthorpe*, born 1916. Articled pupil, 1934; subsequently at H.M. Office of Works and in Norfolk as senior assistant to architect in private practice. In 1946 went to the Exhibitions Division of the C.O.I., subsequently free-lanced on interiors and exhibitions. For the past eight years in the Planning Division of the L.C.C. and latterly in charge of development plan and development control for South London. Now Assistant Director, City of Toronto Planning Board. *Elizabeth Denby*, brought up in a Yorkshire industrial town, took social science at the London School of Economics; has collaborated in planning housing estates, and undertaken surveys on housing conditions, the location of industry, the redevelopment of central areas, etc. Founded the Watergate Theatre Club, is an F.S.A. and Hon. A.R.I.B.A.

ACKNOWLEDGEMENTS

FRONTISPIECE, California State Highways Dept. (Los Angeles Div.). CASEBOOK: from *Picture Post:* p. 362, top; p. 369, 2; p. 395, 4. By Robert M. Adam: p. 363, bottom; p. 377, 8. By Kennet: p. 365, 2. By I. de Wolfe, Arphot: p. 365, 1; p. 366, 1; p. 372, 1 and 9; p. 398, 3. By Galwey, Arphot: p. 369, 6. By G. Douglas Bolton: p. 404, 5. TREES: pp. 383-384, Peter Shepheard. THE MACHINERY OF SPRAWL: p. 413, 2; p. 417, 7, 8; p. 421, 31, Toomey, Arphot; p. 417, 10, Westwood; p. 418, 13, Aerofilms; 14, Eagle Aerophotos; 16, Philipson; 17, H. Lewes; 18, Cullen, Arphot. RATIONAL STANDARDS: p. 423, 1, 3, 4, 5, Toomey. All other photographs were taken by Nairn, Arphot.

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CONTENTS

355 **A Visual ABC** The basic ideas behind sane visual planning are few and simple, forming four stages in a sequence that leads back from mess to order. First: to identify the type of environment in question, and give each its proper classes of equipment and treatment. Second: to remove the clutter, and obtrusive vertical elements. Third: to keep the elements of the scene related to one another, which means close together, by cutting out dead ground and waste land. Fourth: to camouflage improper elements that cannot otherwise be brought to order.

361 **Casebook 1: The Types of Environment** identified—Wild, Country, Arcadia (not Suburbia), Town and Metropolis, with their visual characters.

365 **Casebook 2: Standard objects**, the types of equipment and detailing proper to the types of environment, and the adaptation of standard objects and services to local character.

381 **Casebook 3: Trees** *by Peter Shepheard.* However and wherever trees are used, they have certain elementary biological needs, such as access of leaves to light and of roots to water and soil, that must be met if the tree is to flourish and not become a sick monster. Inept pruning is not only ugly, but can defeat its own object. They require a planned policy and expert maintenance, not the grudging attention of a Borough Engineer who has too many other things under his care already.

387 **Afforestration** *by Geoffrey S. Kelly.* The status, activities and programme of the Forestry Commission are an example of an arboricultural policy which has now overstepped the bounds of sanity. The Commission's planting programme was laid down in one pre-atomic war and trebled in scope in another; the military and industrial necessities it was intended to serve have already disappeared, but in the meantime it continues to absorb marginal lands that could make a better contribution to the national economy under sheep, it continues to invade landscapes whose value was their openness, replacing them by solid phalanxes of conifers, which deny access and obliterate the landscape.

391 **Casebook 4: Specific Problems**, such as Industry, Advertising, Wirescape, Street Lighting, Municipal Planting, and Military Installations—where the decision is not only how to design but where to site.

400 **Casebook 5: Roads**, divided into trunk roads, which are considered as artefacts in their own right, irrespective of the terrain they traverse, and minor roads, which must be assimilated to their landscape.

409 **The Technique of Sprawl** *by Walter Manthorpe.* Wherever Subtopia spreads it enjoys, in the process of spreading, the support—often unintentional—of officialdom and official publications. The main mechanisms of support are 'Informed Opinion' about matters such as density, open spaces, roads, etc., based upon outmoded experiences and thus inhibiting any revision of standards; Economic and Administrative Pressures, which are often self-defeating; Street By-laws, whose cumulative effect is to push buildings apart until the term street becomes a misnomer; and Town Planning Controls, exercised in such a way as to systematically depress densities: building by-laws, whose literal interpretation by local authorities tends again to increase the dead-space around buildings. A few examples of more rational standards in housing layout are given on pages 423-426.

427 **Oversprawl** *by Elizabeth Denby.* Sixteen years after the publication of the Barlow Report, its out-of-date pre-war standards still form the basis of official housing policy, and have become one of the most potent administrative supports of otherwise unjustifiable sprawls of housing. Much of the decentralization and redistribution of population envisaged in the Barlow Report is now accomplished. Demands for overspill are now little more than conditioned-reflex responses to pockets of overcrowding that could be dealt with by central area development. Beyond this the whole concept of density calculations, and the actions based on them, needs to be reformulated on a humane pattern of family groupings.

435 **A Plan for Planning.** Under present conditions our planning machinery at its best does no more than what ought to be its minimum—it can just about guarantee that an existing environment will not be worsened. The kind of positive planning that is needed today in Britain is impossible because planners are fully occupied in dealing with the negative aspects of the existing planning machinery. The prime need at the moment is to reframe our planning policies so that a guarantee that nothing will get worse becomes the foundation, and erect on it a framework of truly positive planning.

Brewed with Famous
Deep Well Water

0
1
2
3
Scale of miles
Total 75

This is the sequel to 'Outrage,' first published in the REVIEW for June 1955, which showed what we are doing to our environment in the name of progress. Opposite is a reminder of it which could also stand as a visual equivalent of the 'prophecy of doom' we made there—for this is Los Angeles, the 'most up-to-date city in the world,' the 'pattern for twentieth century living,' and hence a likely forecast of England in the 1970's or 1980's. Its area is approximately seventy miles square—the equivalent of East Anglia. In the U.S. this may be all right; in Britain it would mean obliteration. In fact we doubt whether it is even a Californian ideal; already a morning's shopping may require a fifty-mile journey, and families are chained to their superbly-equipped houses in the evenings as nobody is prepared to come and sit-in because of the distances involved: St. Simeon Stylites got a similar result with rather less complex organization. Is there a way out? We believe that there is and have tried to outline it in this issue. The article which follows sets down the basic principles simply and the Casebook (pages 361-407) illustrates them. The two articles succeeding (pages 408-430) deal with land-waste and the final article, 'A Plan for Planning,' translates these visual principles into workable administrative terms.

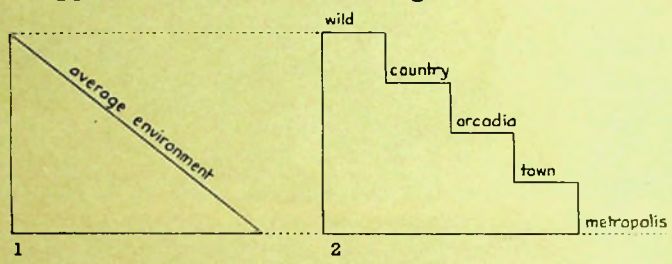
A VISUAL A.B.C.

'The root of the trouble,' sighed the administrator, wailed the designer, 'is that the public is apathetic.' Maybe, but the response called up by Outrage has made us think that at least some of what looks like apathy is in fact a feeling of helplessness. We believe that the man in the street would be genuinely eager to master the principles of visual planning if he thought that there was a chance of understanding what the thing was about.

There is. The basic ideas behind sane visual planning are few, simple and easily comprehended. This article sets them out as a layman's visual ABC—it is literally almost as simple as A.B.C. for there are just four items. They can't be called strictly principles or precepts or rules of thumb, for all the points combine something of each: they are really elements in a four-point sequence which are always meant to be used together as a continuous process—applied both to any existing scene and to any proposed change in it. The examples on pages 359 *and* 360 *show how the sequence works when applied to two typical bits of subtopia, one urban and one rural.*

The crime of subtopia is that it blurs the distinction between places. It does so by smoothing down the difference between types of environment—town and country, country and suburb, suburb and wild—rather than directly between one town and another. It doesn't deliberately set out to make Glen Shiel look like Helvellyn: it does so in fact by introducing the same overpowering alien elements—in this case blanket

afforestation and the wire that surrounds it—into both. The job of this issue is to get straight the basic divisions between types of environment, and to suggest a framework for keeping each true to itself and distinct from its neighbours. When that is done the problem of differentiating between places will solve itself: if, for example, two towns only contain truly urban things, and are without a common mass overprint, differences in topography, climate, size and use will take care of the rest. There are in fact hundreds of categories into which Britain could be divided, from total wild (the top of Suilven) to total metropolis (Piccadilly Circus). As a practical working minimum we have reduced these to five:[1] wild, country, arcadia, town and metropolis. We have used 'arcadia' rather than 'suburb' because of the way 'suburb' is used to describe any town's penumbra of low density housing, when in fact most of this is subtopia and as far from the true idea of a suburb as is Woodberry Down from proper urban redevelopment. The aim of this sequence and the casebook that follows is to re-establish the integrity and separateness of these five basic divisions, and to suggest means of channelling the existing mess back into these legitimate environments. Put visually, this is the difference between an 'average environment'—subtopia—as the lowest common denominator of all the categories mixed up indiscriminately, 1, and a stratified environment with each category differentiated, 2.



1 The first step in applying the sequence to a particular place is to decide what type of environment (wild, country and so on) it is. That sounds obvious, only subtopia has in some cases blurred the divisions so far that the category itself may not be clear. The housing estate at New Addington near Croydon is an example of this: it is such an ambiguous botched-up mess that it could as easily become either town or suburb. Having fixed the category, track down the elements from other categories that have strayed into it. There is a 'town' way and a 'country' way and a 'wild' way of doing everything, and to confuse them is to ruin any hope of integrity from the beginning.[2] There are also some combinations of object and environment—like advertising in the wild—which are bad in themselves as well as being capable of appropriate or inappropriate treatment. The whole of the casebook (pages 361–407) is an explanation of how these two statements work out in practice (i.e. what is the 'town' and the 'country' way of doing things) and is designed to make clear the first point of the sequence, which is, put simply, to maintain—or regain—the unity of the place: to classify it as town or country or wild, remove the alien elements, replace the alien treatments, and resist any attempts to reintroduce them, and thus blur the categories once again.

2 When that is done, and the unities are re-established, there are still so many vertical objects in view that the eye is disoriented. It can't see straight: at its simplest, it sees not the street itself, but the 25-ft. lamp standards stalking down it; not

[1] And two special cases: first, that where big industry is unavoidably set in the countryside, it makes its own landscape—the industrial area—with its own rules (see page 398); second, that the trunk road has its own values as a horizontal strip crossing all the categories (see pages 401-2).

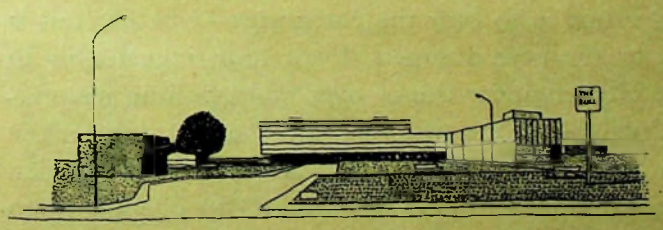
[2] For many visitors to Britain, quite literally from the beginning: the trim and furniture at London Airport, though all of it is 'modern' and most of it is well designed, has so hopelessly mixed up the categories that it is as incoherent as the Hounslow By-Pass which leads from it into London.

the reservoir but the poles of the wire fence in front of it. This is due quite simply to the fact that horizontal objects flow with and blend into the landscape, while vertical objects punctuate it: erecting a vertical automatically means that man is interrupting the landscape to say something.[3] In a town, men need to say a lot—'I am a church, a corn exchange, a market hall, an art gallery.' In the country, which is a compact with nature, much less—little more than 'I am a church representing a village community'; in the wild, nothing at all: the only man-made vertical should be man himself, puny and dwarfed, creeping across an immense moor. In no case is there ever, in any category, licence to mouth platitudes such as 'I am Ministry of Transport standard No. 39201.'

To reset the visual compass, the need is therefore to reduce the clutter; to cut out useless verticals, and minimize others; to tidy up. That has long been axiomatic with big verticals like factory chimneys in the countryside—though, of course, it applies just as much to the towns as well; but in fact it also applies down to as simple a thing as a wire fence. A wire fence in the landscape reads as a line of poles (i.e. verticals) senselessly punctuating a field—re-establish a horizontal by making it into a post and rail fence, and the fence is at the same time *more* obvious but *less* obtrusive. The most obvious example of this need for horizontality is the road and everything connected with it—the road itself being a horizontal strip, the trim, structures and signs cry out to be treated horizontally, and the casebook shows how, on pages 400-405.

Point two in the sequence is therefore to cut out useless verticals: to re-create as far as possible a horizontal world with verticals in their proper place as man's way of expressing things that are worth saying.

3 The scene may now have unity and be free from mess, but may still look like an agglomeration rather than a place. A handful of well-designed elements can't in themselves make up a landscape or townscape: they have to be related to one another. Two sketches can show this better than words (as can the comparative photographs of Old Hatfield and Stevenage on page 414). Pleasant things separated and isolated look like this, 3, a familiar scene, as you can see it in any of the New Towns. Simply bringing them together, and stopping the waste of space (by being ruthlessly economical *not* with the living standards but with the dead ground in between houses) produces something like this, 4—a living place, not a 'neighbourhood unit.'



3

4

This is a particular case of a general principle which is the third point in the sequence—the Principle of Economy: that is, of never wasting a square inch of ground, whether the waste is a vacant lot, a plot of ground too tricky to fit into a standardized layout, or simply the result of making things twice as wide as they need to be. Dead ground

[3] The thicker the vertical the louder it says 'I am': if it appears on the skyline (i.e. breaking out of the scene altogether) the damage it can do is multiplied. Once above the skyline attaching horizontals thereto no longer makes it blend but sets up a parody of the land surface below: that is why overhead wires in towns (or hulking lamp standards with hulking horizontal fitments) are such fundamental crimes.

means a dead town (or village, or hamlet): each square inch should earn its keep.[4]

In a country as crowded as England, this serves a double purpose. Half an acre saved from waste in a town and put to good use means half an acre of countryside left untouched somewhere else: it is the saviour not only of one environment but two. Page 415 shows the saving that could have come about—2,600 acres per fifty thousand inhabitants—in each of the New Towns if this principle had been followed: Adeyfield could have stayed green and at the same time Hemel Hempstead New Town would have ceased to be a set of housing estates casting around desperately for a town centre. In practice much of the difficulty of introducing less wasteful standards lies in the byelaws, the false assumptions and muddled thinking by 'informed opinion' and the timidity of local authorities: the articles on byelaws ('The Machinery of Sprawl,' page 409) and housing policy ('Oversprawl,' page 427) indicate the obstacles, and how they can be overcome.

4 Finally, if, having applied these three points as far as practicable, there are still solecisms or interruptions (and inevitably there will be in an island as crowded and multiform as this) the residue must be camouflaged, and made one with the surrounding landscape. This can sometimes be done with neat design like the Swiss airstrip on page 399: more often it means planting as well. The fourth point in the sequence is, therefore, to camouflage what's left over. The aim of integration into the landscape puts the traditional Water Board camouflage—a screen of conifers—out of court for many localities because the conifers themselves would be an interruption as great as the thing they are intended to screen. Some examples of camouflage are given on page 375, but the principles are easy enough. What is more difficult is to force the bodies erecting the interruptions to make even the smallest effort to show that they care for the countryside—our suggestions are on page 432.

That is the sequence: it might be summed up as unity, economy and freedom from clutter. We have tried to translate it into administrative terms in the article 'A Plan for Planning' on page 431. There we have indicated the changes in the planning system which might ensure that—given the right men for the job—some sort of coherence might come naturally and not have to be fought for. What the sequence provides is not a magic wand which will transform subtopia overnight, but the conditions for the basic fitness of objects in the landscape. The capital crime is to blur the categories—whether this is done by uniform housing at so many to the acre dumped down indistinguishably in town, suburb or country, or from the city engineer doing over metropolitan roundabouts with rustic flower gardens and Cotswold stone walling. And the first duty of the citizen who wants to avoid being an accessory after the fact is to establish which category he lives in, and then to grow adamant in his determination to cherish it: to enhance it when he can, and to protect it when it needs protecting.

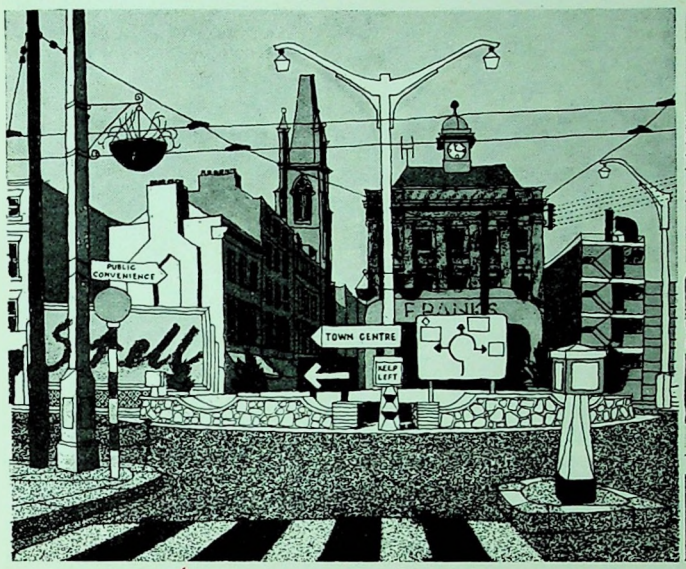
[4] Remembering that any space can earn its keep expressively as well as functionally. Everyone ought to deplore the wasted acres of gardening in Hull's City Centre, because they do nothing to make Hull into a city; nobody would object to Yarm having the biggest market place in England because it is a country town space well treated in a country town way: it makes the town, it is not dead ground.

how the sequence works: two scenes rescued from subtopia and restored to town and country.

rock-bottom subtopia

The two views below, although imaginary, are all too familiar. Wildernesses that in 1956 pass for town and country. How did they get like this? How can they be reclaimed? The TECHNIQUE of reclaiming the wilderness and creating true urbanity and rurality is demonstrated in the following sequence of drawings.

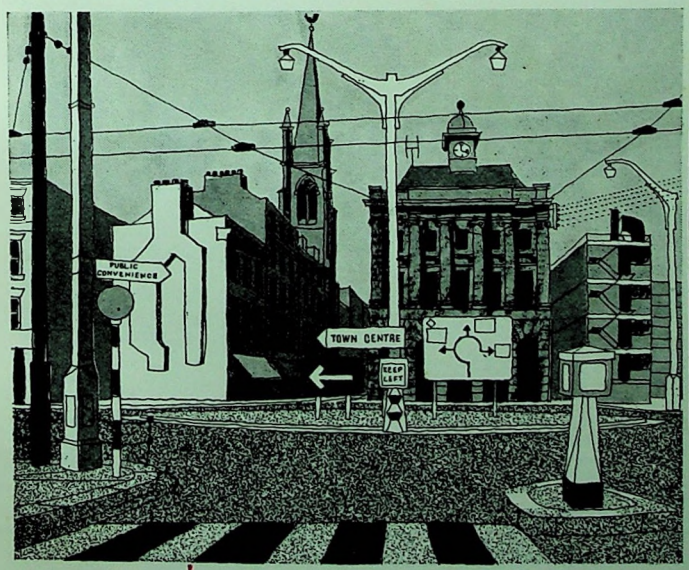
TOWN



COUNTRY

1 restore the unities

The first principle is respect for the category. Ask the question: What am I dealing with? Wild, country, arcadia, town or metropolis? Having decided, stick to the category and augment its proper character. Town: remove suburban rockery roundabout and hoarding decoration; respect architectural integrity in shopfronts. Country: informal road and footpath are adequate: replace suburban rockery and planting by mixed hedge, remove urban advertising.



(over)

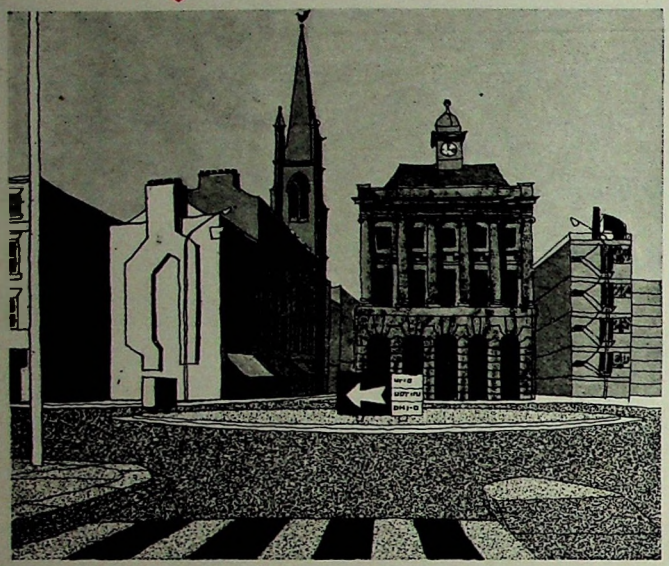
(over)

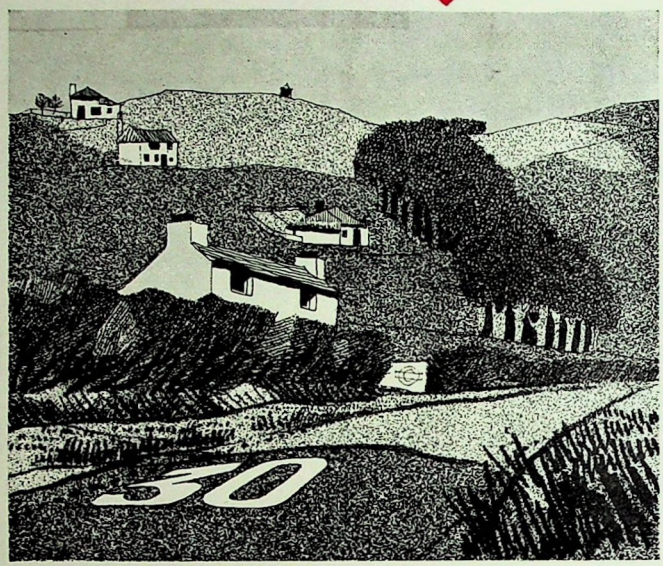
TOWN

2 remove the clutter

Secondly, make sure that every single item that is seen by the eye is essential. Town and country are not dumping grounds for reiterated instructions, most of which are unnecessary. Above all avoid the use of verticals. Town: keep light fittings slender and site unobtrusive, keep road signs to minimum. Country: where possible bury wires; use road surface and walls for road signs and bus stops.

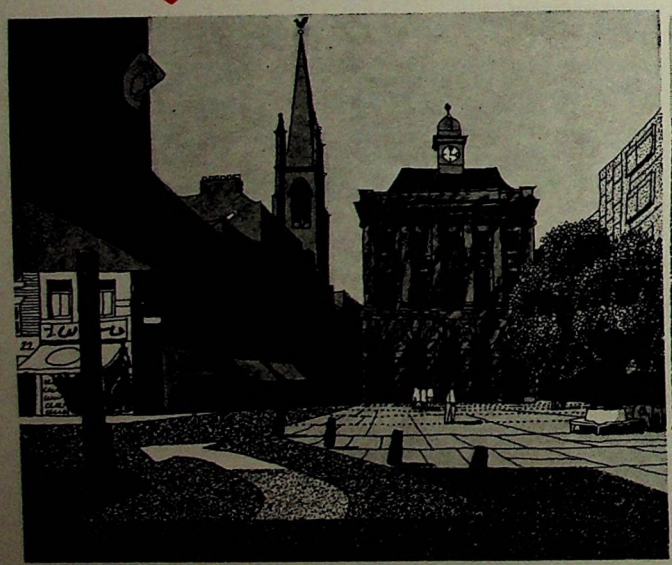
COUNTRY

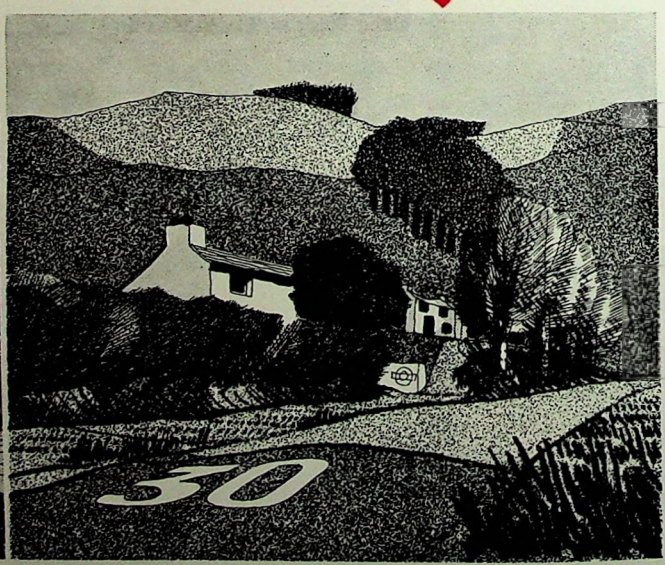




3 camouflage and bring together

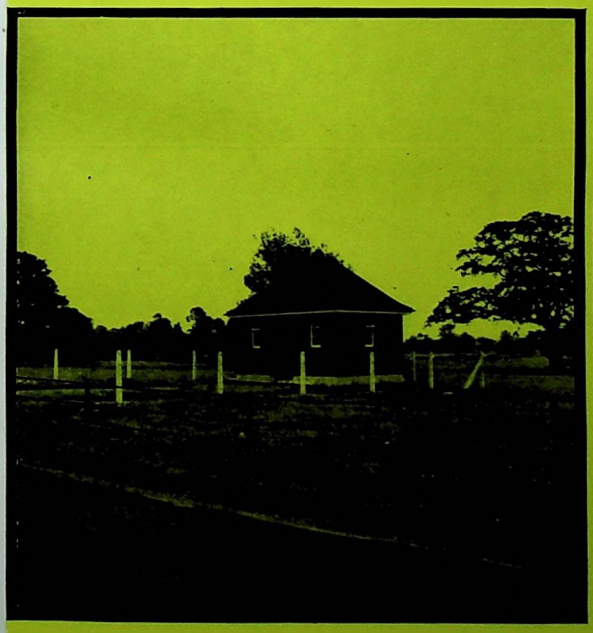
Thirdly, don't waste space. Town: fill in vacant corners with buildings, not gardens: bring back enclosure as opposed to impersonal emptiness. Reorganize traffic so that the dead space in the system is returned to pedestrian use. Country: gather up the scattered buildings, thus extending the area of visible countryside, and at the same time creating a recognizable place, instead of a piece of sprawl. Finally, camouflage the interruptions that can't be moved.





CASEBOOK

This casebook is an attempt to show in the simplest possible way the difference between the main categories of landscape—metropolis, town, arcadia, country and wild—and the right way to design objects in each. It is in five parts. First, this introduction, ending on page 364, in which the categories are defined and an example is given of that almost extinct British animal, a clean break between town and country. Second (pages 365-380) is a collection of objects that are components of every scene—seats, railings, shelters—where the only decision to make is how their design should reflect each category. Third is an article on the care of trees by Peter Shepheard (pages 381-386) with which is linked an article on the folly of afforestation in the wrong place and in the wrong way, by Geoffrey Kelly (pages 387-390). Fourth (pages 391-399) is a section dealing with problems which, like advertising, ornamental planting and military installations, need two decisions—both how they are to be done and where they should go. Finally, the fifth section (pages 400-407) deals with trunk and local roads. Each page in sections two, four and five has a standard layout in which similar objects from different categories are juxtaposed (see, for example, 'seats' on page 365) with a short caption for quick reference above them and an extended caption, including cautionary examples, on the left-hand side; throughout the rest of the book these cautionary examples are indicated by black borders The little thumbnail sketches under the title on each page are also cautionary—a sort of pattern book of the all-too-typical style for 'municipal improvements'. The principles underlying the casebook are those which have just been enumerated on pages 355-360. Disregarding them will, at its simplest, lead to the two archetypes of Outrage shown below, which are repeated county by county from Penzance to Wick: left, the brick box with a wire surround dumped down in the middle of the countryside (Shillingstone, Dorset): right, the urban and ugly bus stop sign put into the rural scene with the maximum of interruption (near Wateringbury, Kent). The first is by discourtesy of one of the local utilities (it is impossible to tell which), the second by discourtesy of London Transport. Neither needed planning permission—a state of affairs for which we give a remedy on page 434.



METROPOLIS—*bustle, teaming with people, everything larger than life. It is the heart of things so you must expect to be bandied about and harassed by the traffic, overawed by the buildings. It needs monumental scale and crowds—but not false monumentality and empty open spaces, a; the metropolitan examples in the casebook show how one needn't automatically mean the other.*

a

not this . . . .

key:
a, the 'Third Rome.'
1, Oxford Street, London.

1

TOWN—*human scale; full of life, not an underpopulated waste land; perpetually changing enclosure, not endless avenues. A town is a complex and compact pattern like the inside of a watch, and every change should aim to make the pattern richer and not to blow it apart. It lives by enclosure—the space bounded by walls and floor; 2 is a perfect example—and the enclosure should never be naïve, inconclusive or broken open without good reason: this means a complex street pattern, rapid changes in width, maintaining of a continuous building line, and unobtrusive street furniture. In 2, the foreground enhances the Royal Palace; in b, through badly placed and designed furniture, the foreground almost obliterates the Clarendon building. Country towns are smaller and simpler, but have the same need for enclosure and compactness: the key is whether you can see the country at the end of the main street. It is still possible, for example, in Ludlow and Bridport—but in how many other British towns?*

b

not this . . . .

key:
b, Oxford.
2, Amsterdam.

2

ARCADIA—*a compromise for housing people near a town and still giving the effect of being rural: hence small scale, dainty, always keeping an illusion of being either in fairyland, 3, or in the country, 4 and 5. The illusion and the miniature scale are vital: anything which explodes them must be rigidly excluded. Hence fairyland, which has a lot of houses in it, needs broken lines, thick lush planting, tiny winding roads, 3: never a set of house-carcases jammed along a straight main road, c. For mock-countryside universal park-like planting, extreme camouflage for the houses and extreme neatness . . . .*

c

not this . . . .

key:
c, anywhere; we think it is Warrington.
3, Welwyn Garden City.

3

Arcadia cont. . . . . *in the trim; never a bare-faced spatter over the landscape, d. Arcadia is obviously related to a town, but it should never become a choking ring of sprawl. It should be sited near the parent where the landscape is most likely to aid the illusion — near Woking, for example, not beside Barking Creek. 'Municipal rustic', though suburban in origin, is the last thing to be used in arcadia—it's dowdy, not dainty. The casebook examples show a true vocabulary for arcadian design.*

d

not this . . . .

Key
d, Stirling.
4, Luton Hoo.
5, Sunningdale.

4, 5

COUNTRY—*genuinely countryside things need no illusion or affectation—they can be as bold and brutal as possible. The vital thing in a rural landscape is continuity—freedom from unnecessary non-rural interruptions. These interruptions should really not be in the countryside at all: if they have to be they must be effaced from the view with all the skill of camouflage that we possess. The human additions in 6 inflect the view and preserve the continuity—the walls, the bridge, and the compact village beyond it; the human additions in e shatter the view with alien imports: poles, wire, notices and huts full of guns.*

e

not this . . . .

Key
e, Bicester Garrison.
6, Burnsall, Yorks, W.R.

6

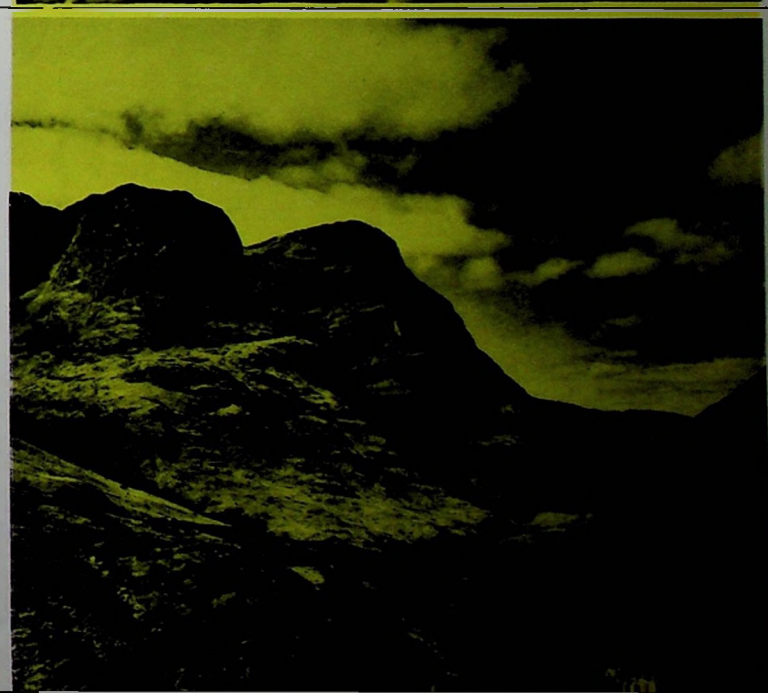
WILD—*nature must win. If a landscape contains any man-made activity that isn't cringeing in subservience it ceases to be wild. Throughout the casebook there are categorical negatives in our suggestions for the wild—no wire, no huts, no industry: they are quite deliberate. Introduce even the simplest interruption into the view and you change it from being nature dominating man, 7, to man bawling at nature, f: both are, in fact, views of the same place. There can be no intermediate stages between wild and not-wild.*

f

not this . . . .

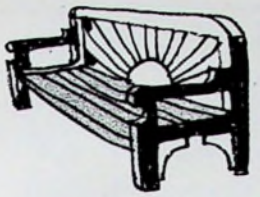
Key
f and 7, the Three Paps of Glencoe.

7



CLEAN EDGES: It is little use keeping the categories intact if you allow the areas where they join to become a no-man's-land. The break—between town and country, for example—must be sharp, without mediation. That, for Britain, sounds like locking the stable door some decades after the horse has bolted, but in fact there are still one or two places where it is possible to walk straight out of the town into the country, and this page is a sequence from one of them—at Chichester. This is a lobe of ***real*** countryside stretching behind the cathedral to within a quarter-mile of the market cross; it starts as a slit in one of the main shopping streets, 1 . . . which reveals itself to be a long walled alley, 2 . . . at the end of which is an urban gate like a boundary beyond which are big trees and green fields, 3 . . . the path—a genuine country path—wanders beside a stream, 4 . . . then through another gate and out across the open fields, 5 . . . On turning round, the image of the town almost knocks the viewer over . . . the cathedral, unblurred, rising up above its wall, 6.

seats



Caution: not rustic

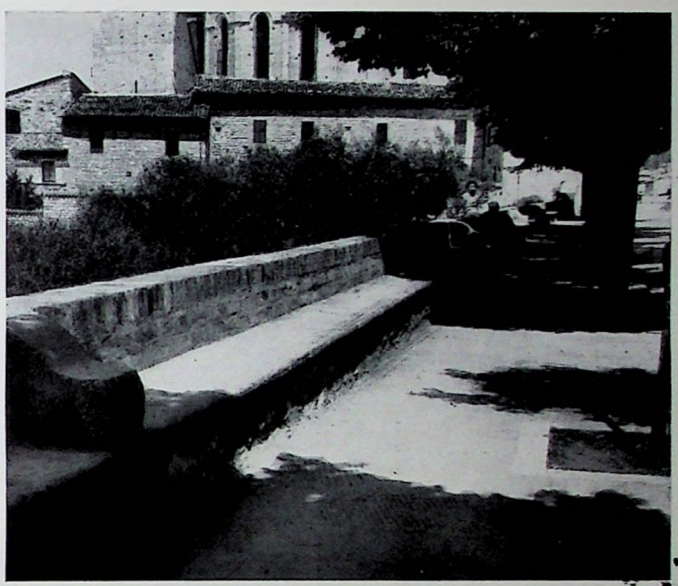
Metropolis	monumental, ***1.***
Town	neat, mass-produced, ***2, 3.***
Arcadia	sophisticated and dainty, ***4, 5.***
Country	rough and workmanlike, ***6, 7.***
Wild	none: sit on the landscape.

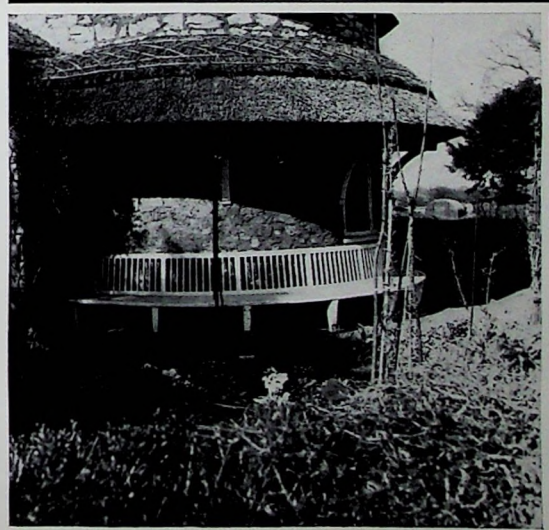
Here in their simplest forms are the distinctions we are trying to make between the categories of landscape as applied to designing an ordinary seat. Being metropolitan is largely a matter of scale and of making each space do

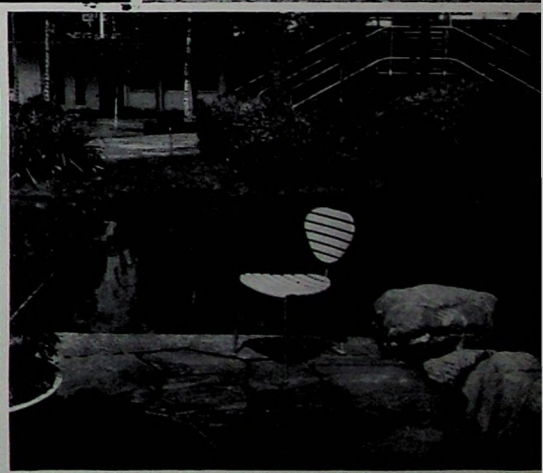
a

more than one job—so keep the seat, monumental, 1 (but not fake monumental, a), and make the seat back serve as a guard-wall. Town seats should reflect town life and help to make alive the space between buildings; light and serviceable—almost portable—2, or deftly fitted into a corner or round a tree, 3, urbane as well as urban. Arcadia is the place for daintiness and delicacy and deliberate small scale. The bench in 4 is delicate spruced-up rural, but not fake rustic, and the seat in 5 is dainty without being in the least coy. The countryside is a compromise with nature—and village seats can reflect it by being down-to-earth honest jobs of work, 6 and 7—the key qualities being simplicity and roughness, not intricacy, sophistication or machine-smooth finish. The scale is brought back to man-size from the fairy-size of 4 and 5. In the wild—no seats. We really mean this. If you want to experience raw nature, that means accepting the discomforts—no car parks, no tea bar, no w.c.—along with the air and the views.

1 ***2*** ***3*** ***4, 5***







key:
1, *Assisi.*
2, *Wallingford.*
3, *Stratton Audley, Oxon.*
4, *Blaise Hamlet.*
5, *Strandbad Tiefenbrunnen, Zurich.*
6, *Godstone, Surrey.*
7, *Low Row, Yorks, N.R.*

6, 7

footpaths

Caution: not segregated.

Metropolis	concourse, ***1.***
Town	system of pedestrian ways, ***2.***
Arcadia	network of paths, ***3;*** never straight-jacketed, ***a.***
Country	simple unfenced field path, ***4;*** camouflaged into countryside, ***5;*** free from the road system, ***6.***
Wild	barely defined tracks, ***7.***

A concourse is natural for a metropolis, 1, *being big enough to contain the multiform ebb and flow of city life. There is no simple pattern of flow, everyone's job is different: a mass of independent diagonals. A town needs more than sidewalks for its pedestrian lines of flow—it needs a completely separate system,* 2. *This needn't be cut off from the town, railed off and compartmented: here the pedestrian way is indicated only by bollards. The one thing that a footpath must never be is straight-jacketed. The path below, a, is worse than no path at all because you are cut off from the landscape altogether in a tube of concrete and wire.* ***1, 2***

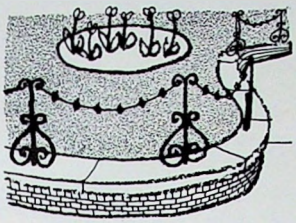
By contrast, all of 3-7 *are part of the environment. In* 3 *it is a twisty intricate path for a twisty*

a

intricate arcadian landscape; in 4 *an honest-to-god English* ***3, 4***
field with an honest-to-god path across it, in 5 *a country wood with a footpath which conceals not only itself but the walker as well (see arrow). A path can be straight-jacketed by following a rigid road line. Why should it? By simply moving it three feet up the bank you can make it into the focus of the village,* 6 *(and try deducing that solution from the byelaws).* ***5***
In the wild, you go where you can scramble, 7, *no easy pathways and no carefully lettered indicators. Nature's the boss, not the rambling party.*

key: 1, *Vicenza.* 2, *Tarquinia.* 3, *Douglas, I.O.M.* 4, *Potter Street, Essex.* 5, *near Ottery St. Mary, Devon.* 6, *Tissington, Derbys.* 7, *Grimspound, Dartmoor.* a, *Boreham Wood, Herts.* ***6, 7***

railings



Caution: not ornamental.

Metropolis	an extension of the wall, ***1;*** or monumental, ***2.***
Town	light and deft, never shouting, ***3*** and ***4.***
Arcadia	simple but subtle, ***5;*** or neat, parklike, ***6.***
Country	horizontal; rough and firm, ***7*** and ***8*** overleaf; but not messy or heavy, ***a*** and ***b.***
Wild	none.

Railings are the key item of street furniture because of the damage they can do. They define space but don't enclose it; and if the definition is botched, a and b, the result is not just one more bad thing in the view but obliteration: complete walling-off would do less harm than this. The railings shown not only preserve their environment but intensify the character of each. The metropolitan examples, 1 and 2, are large scale but not heavy; in many places in a city there is no room for a railing, and a handrail doubles with the wall, again one thing doing two jobs. 3 returns to a town rail, accentuating the corner but not blocking the view, ***1, 2***

a

and serving as a bicycle rack as well; 4 offers an urban solution for high railings. 5 in its sophisticated curve and sophisticated contrast of materials is the perfect partner to the arcadian jungle—yet what could be further from the olde worlde ***3, 4***

b

designs usually dished up as suburban. 6 shows the other side of arcadia: the trim parkland with a house ***5, 6***

[continued overleaf

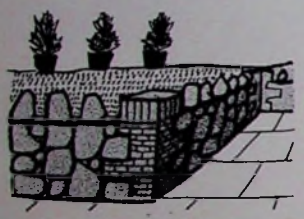
railings cont.

continued from previous page]

in every copse, an invisible city. It is an illusion, so everything—including the railing—is on its best behaviour. In the country, the criterion is not 'best behaviour': it is true behaviour, i.e. an honest job done honestly—whether in wood, 7, or metal, 8. All eight examples have one moral—keep the line of flow horizontal: the rail, not the post, is the important thing. **7, 8**

key: 1, Duke of York's steps, London. 2, Shrewsbury. 3, Zürich. 4, Seaton, Devon. 5, Strandbad Tiefenbrunnen, Zürich. 6, Luton Hoo, Beds. 7, near Egerton, Kent. 8, Stanstead Abbotts, Herts. a, Solway Firth near Bowness. b, reservoir at Aldenham, Herts.

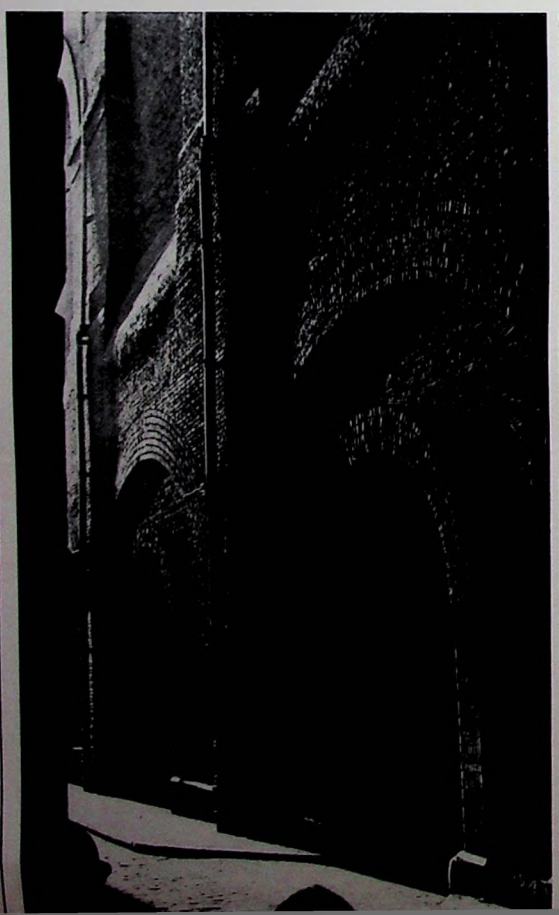
walls and hedges

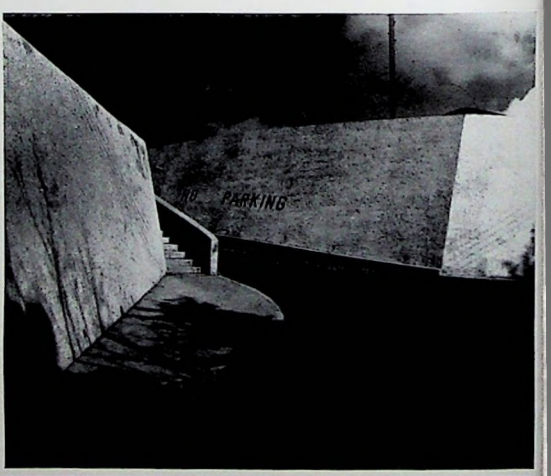


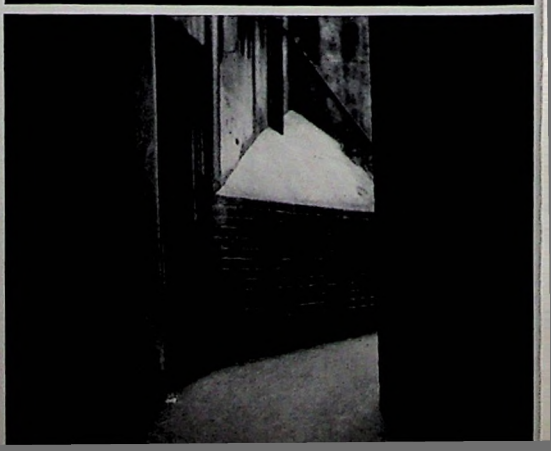
Caution: not rustic

Metropolis	huge scale, ***1*** and ***2***.
Town	creating enclosure, ***3***.
Arcadia	hedges trimmed and regular, ***4***.
Country	hedges bushy and rough, ***5***. Walls rough-textured, ***6***; well kept-up, ***7*** and ***8***; not derelict, ***b***.
Wild	boulders thrown together as a boundary, ***9***.

This page shows walls as enclosure: in a metropolis, use metropolitan scale, 1 and 2: if you want a town environment, bring the scale down, whilst keeping the enclosure firm, 3. 1 and 3 are within a mile of each other in London, each appropriate to the particular locality: for 'London' is not automatically metropolitan from Trafalgar Square to Hampstead. One of its great charms is that it isn't: but each section is true to itself—Soho a town, Highgate arcadian. Never put suburban walls into the town: for one thing they break the unity of place irrevocably: for another the town has no need of a superimposed defining pattern—the buildings provide that automatically: town space is a matter of buildings and the floor between them, and needs as few extra interruptions as possible. Arcadian hedge, 4, and country hedge, 5, point the basic difference between arcadia and country: that arcadia is trim and country rough. What applies to the hedges in these photographs applies also to the verges—mowed **1 2/3**







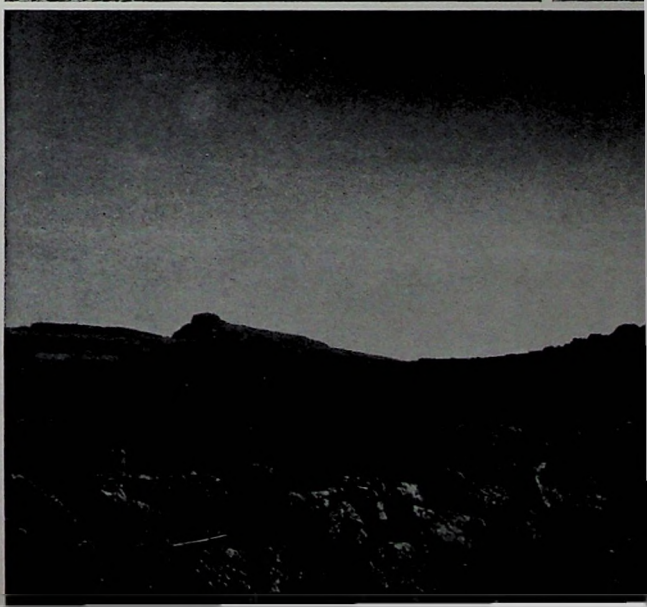
and tidy in 4, rough in 5, and even to the road surface—though it's a hard job to find an unsurfaced chalk road on the downs today. Similarly country walls are rough, 6–9, but not ramshackle, a. If there is nobody to keep up dry-stone walling, cap it with cement, 7, but don't just let it collapse. Never mind the lack of craftsmen: do the next best thing—modern methods aren't either bad or good in themselves, its what's done with them that is bad or good. 8, regionalism at its best: a dry stone wall capped with turf and made into a sod hedge as is done in the Isle of Man and part of Cornwall. Just as modern materials should be welcomed, so regionalism like this—which is a common-sense thing to do when the banks are deep and soft—should be preserved. We are so proud of all the stone dead 'traditions' which we have embalmed into tourist attractions; why don't we care for some of our living ones? Best of all, translate the old idea into the new materials. If the wild is enclosed it ceases to be wild; but there is no better way of indicating its

a

boundary than a stone wall of piled up boulders gathered up from the moor, 9. This is a frontier: the others were divisions.

4, 5

6/7 8



9

key
1, *Cannon Street Station, London.*
2, *Launceston.*
3, *Long Acre, London.*
4, *Camilla Lacey, Surrey.*
5, *near Itchen Stoke, Hants.*
6, *The Cronk, I.O.M.*
7, *A.38 near Chewton Mendip, Som.*
8, *near Launceston.*
9, *Hay Tor, Dartmoor.*
a, *near Duntisbourne Rous, Glouc.*

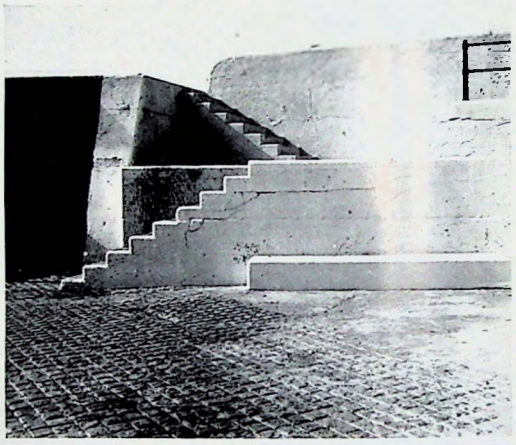
street furniture

Besides seats and railings there are many more items of street furniture which can make or break an urban street view. Here are examples of some of them to show that the things that are normally botched can be done well.

The job of street furniture is to articulate the space between buildings: all it usually does today is to browbeat everything else in the view. Making the space speak means either extreme lightness, like the Dutch kiosk, 8, (deliver us from the G.P.O.'s) or integration with the floor and walls. The first three examples do the latter perfectly and in a perfectly urban way —two methods of ensuring that tree roots can breathe without having a scabby patch of soil in the pavement, 1 and 2, and a cycle rack, 3. All three are at Crawley New Town —would that the town were worthy of its furniture. Monumental steps need not be fussy, 4—compare them with the messy indecision around the George VI memorial in the Mall. 5, bollards and 6, bollasters show non-literary trim at its best: no signs are needed, there is no break while the eye has to digest an ill-lettered (and usually ill-phrased) message; the message is implicit in the street scene. Similarly, the eye reads the litter box in 7 as part of the wall— something added to the existing pattern, not imposing its own rule of messy and inert detailing.

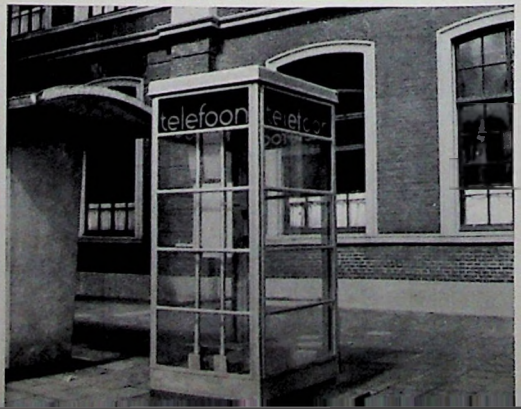
1, 2

3, 4



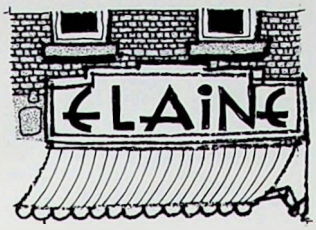
5, 6

7, 8



key:
1-3, *Northgate, Crawley New Town.*
4, *Peel, I.O.M.*
5, *Harlow New Town.*
6, *Tarquinia.*
7, *Seaton, Devon.*
8, *Alkmaar.*

lettering



Caution: not coy.

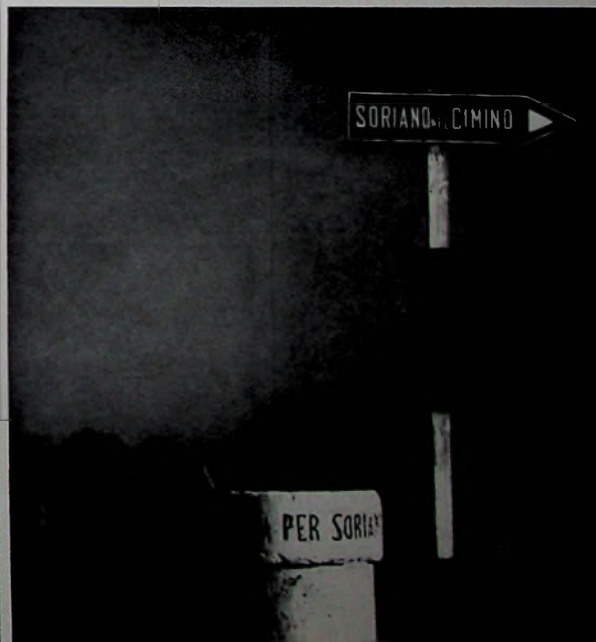
Metropolis	bold and simple, ***1.***
Town	crisp and punchy, ***2-4;*** not anaemic, ***a.***
Arcadia	dainty, ***5*** and ***6.***
Country	individual and roughly cut, ***7-9.***
Wild	as little as possible & as primitive as possib

Taking a weak sans alphabet and using it indiscriminately in town, suburb and country is a copybook subtopian technique. Here are some alternatives starting with good *sans used in the right way,* 1, *to give metropolitan scale. Town* ***1***

a

lettering doesn't need the scale but it must have guts. If it has, it can even transform such a sleazy shape as a keep left sign, 4. *Most of the well-lettered street names,* 2, *are now being replaced by feeble shadows, a. Why?—when they can be reused like this example at Stafford,* 3. ***2 3 4***

To keep the intricacy and small scale of a suburb there's no need to be coy: genuine refinement—as against 'refeenment'—will do it without affectation, 5 *and* 6. *And a notice in the country is almost a personal communication (and the last place for bureaucratic jargon)—the lettering used can justifiably carry an individual stamp,* 7–9; *but one breath of self-consciousness and the effect floats away to leave behind an arty nonsense saying in effect—'ooh, look at me.'* ***5 6 7 8 9***



key
1, *Canterbury.*
2, *Ripon.*
3, *Stafford.*
4, *Mansfield.*
5, *Santon, I.O.M.*
6, *Cranborne, Berks.*
7, *near Ashbury, Berks.*
8, *Charborough, Dorset.*
9, *near Soriano, Italy.*

paint

caution: never arch and pointless

Metropolis	Simple use of paint, particularly black and white, makes a common-sense pattern that can fit any landscape; Metropolitan, ***1;*** Town, ***2, 3;*** Country, ***4, 5;*** Wild, ***6.*** Introduce whimsey and the result is absurd, ***a.*** Arcadia is the place for sophisticated paintwork.
Town	
Arcadia	
Country	
Wild	

The point here is to show how paint, when applied as a simple trim to objects which already fit in the landscape, intensifies the original effect of each. The metropolitan warehouse, 1, *gains in scale: the town street,* 2, *grows crisper; the space enclosed in the market place,* 3, *is heightened because its edge is defined by quoins. The country cottage,* 4, *is tied more firmly to the landscape: the houses of* 5 *and* 6 *are tighter, more drawn in (i.e.* in *the*

1,2

landscape, not on *it) because of the trim around windows and doors (as can be compared directly in* 6 *with the other cottage). But the garages, a, remain a piece of pointless pattern-making for its own sake: the paint must correspond to a common-sense pattern—doors, windows or simple structural divisions.*

3, 4

key:
1, Amsterdam.
2, Ilkley.
3, Folkingham, Lincs.
4, near Kentraugh, I.O.M.
5, Newton, Cumberland.
6, Mounthengerhope, Peebles.
a, Zurich.

5, 6

the shelter

Caution: not dowdy

Metropolis	take shelter in the buildings around
Town	part of the pattern, ***1;*** or portable, ***2;*** in cases simple and light.
Arcadia	dainty: urban derived, ***3;*** or mock-rural, ***4*** but never dowdy.
Country	part of the pattern, ***5;*** or portable, ***6;*** in cases simple and unaffected. Never suburban, ***a.***
Wild	go prepared for the weather.

No shelters in the wild because the point of going there is to submit to nature: physical discomfort is as much a part of that as 'mental liberation.' No shelters in a metropolis because porches and doorways are always near at hand and the buses are frequent: there is anyway no room on a metropolitan street for even the simplest shelter.

In the other categories, shelters can either fit into the pattern (town, 1, and country, 5) or be so light that they sit on the pattern without interruption (town, 2, and country, 6). A fair criterion is that if they are portable—i.e., if the eye can imagine them being carried away—they aren't an interruption. Never, ever, have a shelter which looks as though it is transplanted from a corporation park in the Black Country, a: in fact, a and 5 are in consecutive Dorset villages on the road from Blandford to Shaftesbury. 5 would have been even better without the bus-stop pole and with the sign actually attached to the shelter, as in 4.

1, 2

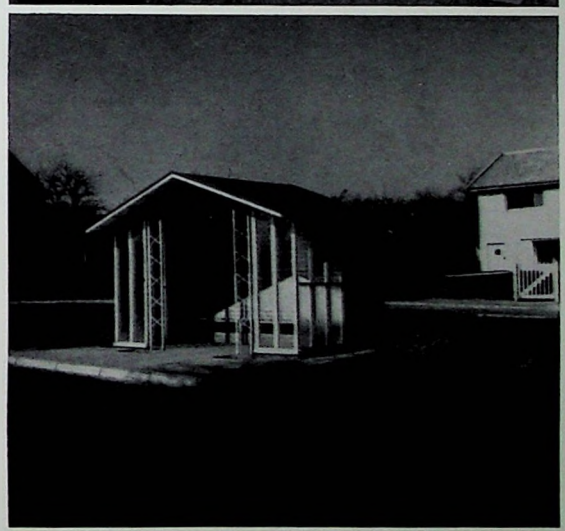
An arcadian shelter must be dainty: it can play at being a little house, 3, or at being a little farm building, 4, corresponding to the 'urban' and 'rural' parts of arcadia; what it must never do is to look a frump.

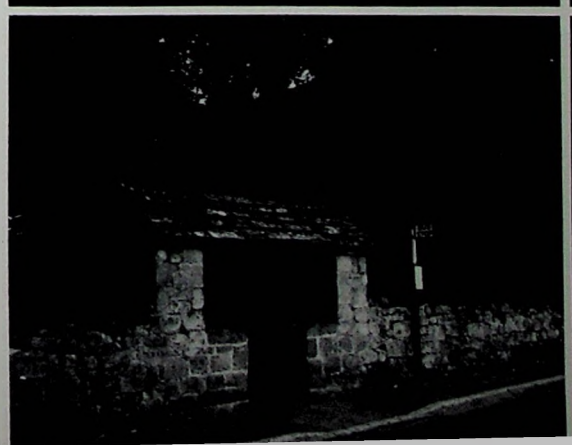
3, 4

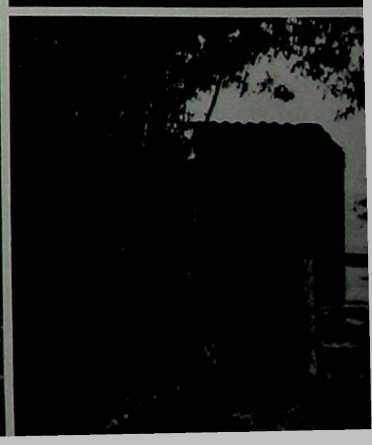
a

key:
1, Mortlake, Surrey.
2, Carshalton, Surrey (standard London Transport design).
3, Hales, Norfolk.
4, Keston Common, Kent (standard London Transport design).
5, Iwerne Minster, Dorset.
6, near Preston Bissett, Bucks.
a, Sutton Waldron, Dorset

5, 6







the 'amenity' and the 'utility'

Caution: not sticking up in the view.

Metropolis	inside the building line, ***1;*** or underground, ***2.***
Town	unobtrusively part of the urban pattern, ***3.***
Arcadia	camouflaged as much as possible, ***4*** and ***5.***
Country	done with minimum of fuss, ***6*** and ***7*** (when the 'amenity' isn't itself an interruption); fitted into the countryside pattern, ***8*** and ***9,*** not sticking out of it like ***a;*** or camouflaged, ***12.*** Siting out-of-the-way, ***b,*** is no good without camouflage, ***10.***
Wild	as few as possible. If at all, screwed into the landscape, ***11.***

Little brick-built boxes—lavatories, transformer stations, gasworks extensions, automatic telephone exchanges. They are nearly all outside planning control and very few people bother about them, yet they can make or mar any view. In any urban landscape they only need to fit in to the particular pattern; in open country or to preserve the illusion of arcadia they may need camouflage as well. In a metropolis there's no room to spare for freestanding 'utilities': they should all be out of the way, either underground, 2 *(this example has no other virtue), or fitted into the buildings themselves,* 1 *(actually inside a pier of one of the shops in the new precinct at Coventry: a splendid bit of space-saving).* ***1/2*** ***3***

In a town there is more space to play with, and the utility can be tucked behind a wall, 3. *This one—a lavatory—is in the cathedral close at Ely and is almost invisible from* 100 *yards. In arcadia the need for unobtrusiveness is extreme. A gasworks is the last thing to encourage rustic illusions: so camouflage it,* 5. *Careful siting made a lavatory in* 4 *almost invisible behind the wall and then ruined the effect by adding outrageously fake wrought-iron signs for 'Ladies' and 'Gentlemen'. It is the countryside which bears the brunt of ill-sited utilities—even the relatively innocuous country recreation ground is rarely as good as that at Cerne Abbas, with the entrance carefully sited,* 6 *(just beyond the speed limit sign) and the objects inside treated country-fashion,* 7, *standing on simple turf without reach-me-down municipal trim. The archetype of the bad utility is the little brick box with its little concrete fences, a, stuck down in the countryside without a thought of how it is going to look-* ***4, 5*** ***6, 7***

the 'amenity' and the 'utility' cont.

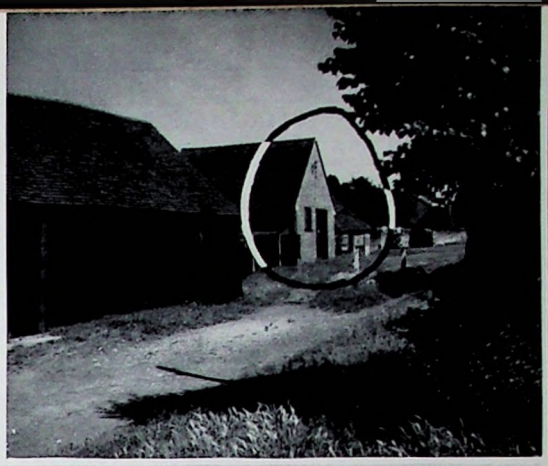
a

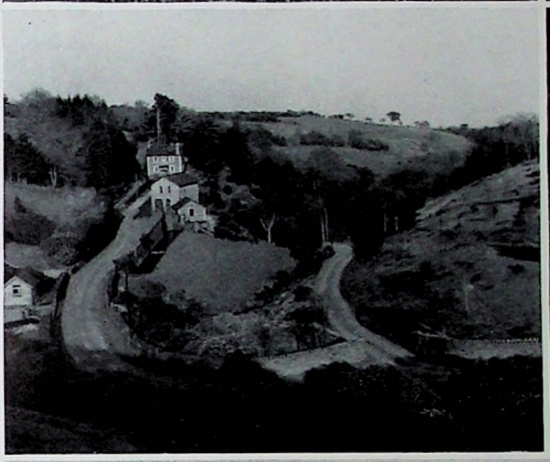
On this page is a set of variations on the theme of making the little brick box fit into the landscape. It can be fitted into the rural pattern—the ringed building, 8, *is an automatic telephone exchange;* **8, 9**

b

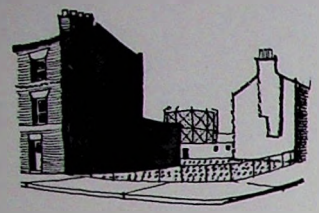
the annexe in 9 *is a public lavatory—it can even fit the pattern of a wild landscape, if it has to, with unobtrusive design and an appearance of having grown out of the ground;* 11 *is a small Swiss hydro-electric station. In almost every case it simply means doing without the surround of wire, and butting up the box to a wall or another building: a combined effort for the common good instead of 'damn your view, Jack, my regulations are satisfied.' In open country even that isn't enough. Siting can help, but even putting plant out of the way, b (this pumping station is sited in a steep combe out of the way of any general view) is useless if the building isn't camouflaged: and—worse still—if the unities are broken by suburban planting in front of it. What should have happened is shown in* 10. *If camouflage is allied to a natural feeling for landscape the result can be magnificent.* 12 *is a planted knoll by a Swiss roadside which provides punctuation, not interruption. Inside it (inset) is just the sort of squat amorphous box which in England would have been set smugly in the middle of a field to crack open the view.* **10, 11**

Key: 1, *Coventry.* 2, *Cambridge Circus, London.* 3, *Ely.* 4, *Chalfont St. Giles, Bucks.* 5, *near Zurich.* 6 *and* 7, *Cerne Abbas, Dorset.* 8, *Shamley Green, Surrey.* 9, *Muker, Yorks. N.R.* 10 *and b, near Hennock, Devon.* 11, *near Andera, Switzerland.* 12, *near Winterthur.* a, *Blackrod, Lancs.* **12**





building lines and sight-lines



caution: don't leare corner sites empty.

Metropolis	economy forces full use of sites anyway.
Town	keep corners intact, ***1*** and ***2;*** rebuild to existing street line, ***3.*** Don't blow open, ***a;*** or leave vacant, ***b.***
Arcadia	keep the building line varied, ***4;*** break it up with planting, ***5;*** or camouflage completely, ***6.***
Country	conversion, ***7;*** not demolition, ***c.*** Augment pattern, ***8*** and ***9;*** or camouflage by careful siting, ***10*** and ***11.*** Make sight lines fit pattern in villages, ***12;*** and in open country, ***13.***
Wild	if at all, build in subservience to the landscape, ***14.***

In town and metropolis man is building on nature: in arcadia he is trying to hide himself in it; in the country he is building in harmony with nature, and in the wild, if he has to build at all, he builds under nature's orders. These may be truisms, but they express a roomful of theory. Add to them the further truism that whatever is being built ought to augment the existing pattern, and they summarize the moral of this sequence of photographs.

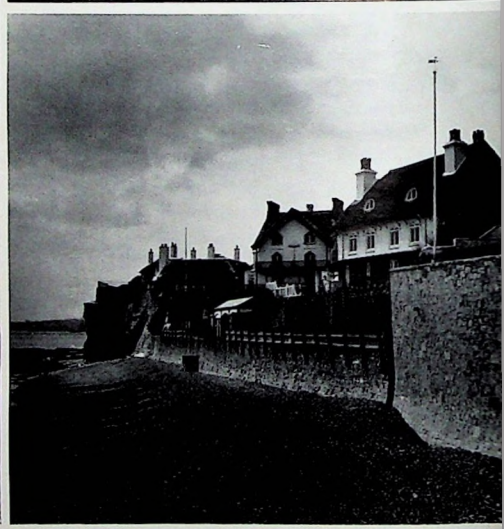
1,2

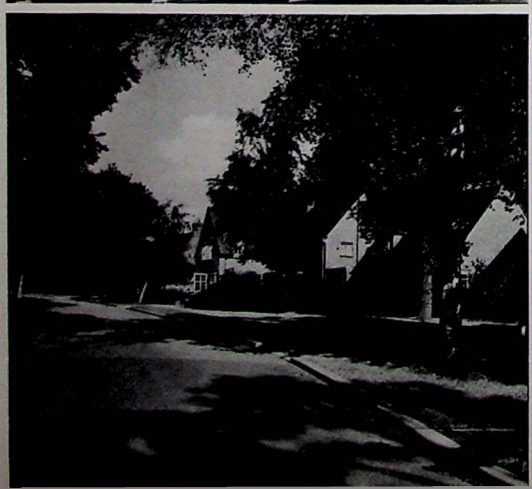
a

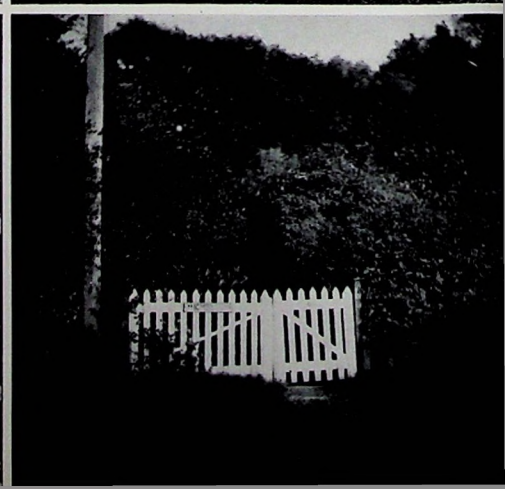
b

The problem hardly arises in a metropolis, being solved automatically by the cost of land: in a town, which depends on crisp enclosure, carrying building lines right up to the corners is of first importance, 1. *If you round off the corner or leave it vacant,* a, *the whole space disintegrates. Often enough this is done to provide a sight line for traffic: both traffic and town would be better served by a halt or traffic lights. To avoid having pedestrians squeezed between road and wall, tunnel through the corner,* 2, *but leave the enclosure intact. Rebuild to the old street line,* 3, *not to some far-fetched and never-to-be-fulfilled improvement line, and if you have slum cleared,* ***5, 6***

3, 4







put truly urban houses back on the site instead of making a hole in the street, b. Arcadia abhors straight lines; the building-line should be as varied as possible to keep the scale down, 4. The same result can be achieved with planting, 5, or by complete camouflage, 6. In the country, don't demolish, c, where you can recondition, 7 at far less than the cost of a new house. New housing is usually a cut rate reflection of the council estate in the nearest town: well treated it will augment the village pattern, 8: something to be welcomed, not feared. **7, 8**

c

It can even set about creating a compact village centre where there was only sprawl before, 9—the arrow indicates the new houses. Isolated houses in the countryside are often unwelcome: careful siting down a track, 10, can make them invisible from the road, 11. To break open a village to provide a sight line is criminal: one road junction may be the only focus it has got. The traffic can halt—ten seconds won't kill it. One way round this, almost entirely neglected, is to use mirrors, 12; as the photograph shows, it enriches the village besides easing the traffic problem. In the countryside, the stock solution at a junction is to rip apart the corners and put up either a roundabout or a mess of wire and concrete posts. Two counties—Cheshire and Herefordshire—do it properly with neat railings neatly painted, 13. Finally, if you must build in the wild you have an obligation to obey the site implicitly. These Highland crofts may lack every sort of modern convenience, but they are a model of how to build in the wild: low, soft textured, screwed into the landscape like an extra set of boulders.

9 10 11 12 13

key: 1, Stamford. 2, Castletown, I.O.M. 3, Portsmouth. 4, Sidmouth. 5, Welwyn Garden City. 6, Biggin Hill, Kent. 7, Beaminster, Dorset. 8, Hales, Norfolk. 9, Laxey, I.O.M. 10 and 11, near Santon, I.O.M. 12, Winster, Derbys. 13, near Skenfrith, Mon. (site actually in Herefordshire). 14, Cliff, Isle of Lewis. a, Stone, Staffs. b, Poole. c, Godington, Oxon. **14**

monuments

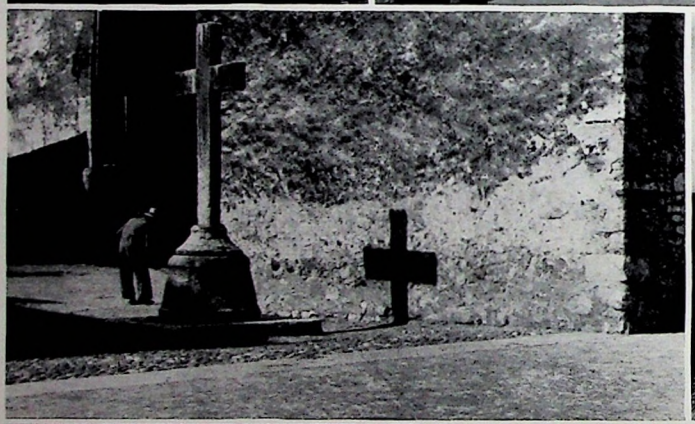
caution: not cluttered up.

Metropolis	preserve them, but their environment must take its chance, ***1.***
Town	re-use in today's pattern, ***2;*** keep them free from fencing, ***3;*** not obliterated by it, ***a.***
Arcadia	keep trim, ***4,*** but not genteel.
Country	unaffected trim, ***5;*** treat naturally, not artificially, ***6*** and ***7.***
Wild	leave them entirely alone, ***8.***

A monument can either be just simply the sum of its scarcity and historical importance, or a living part of the environment, the past-in-the-present. If a monument is to live it mustn't be railed off, fenced around, beautified or even pampered. It must stay in the view on its own merits: otherwise 'preservation' means obliteration, a. In a metropolis there is no question of preserving the environment intact: buildings must fend for themselves like the Wren City churches, thereby creating new extremes of scale which are valuable in themselves, 1. *To re-use a palace as the town's post office is better than turning it into a museum,* 2*—if the con-* ***1, 2***

a

version is done sympathetically, as it is here. Similarly a cross can't convey its message through a screen of fencing and shrubs: it must be brought right into the pattern of town, 3, *or country,* 5. *(Warning to goggle-eyed parks superintendents:* 5 *is rubble Cotswold limestone in a Cotswold village, i.e., the one place where it* isn't *out of place.) Arcadia needs mown grass and trim detail—*4, *the Manx Tynwald hill—not for its own sake but to fit into the arcadian pattern. Impose trim lawns, as the Ministry of Works do, on a ruined abbey in the middle of* ***3, 4***

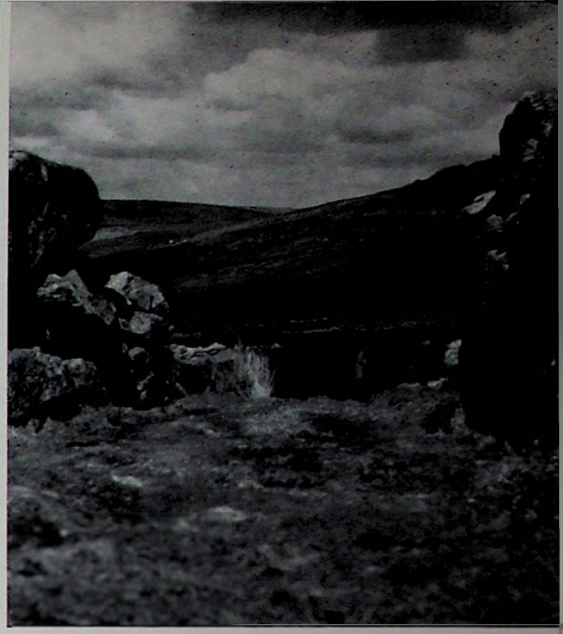


monuments cont.

Roman ruins, 7, doesn't 'debase' them, it heightens their value; it is the equivalent of accepting old people into your own home instead of sending them, respected but unloved, into an institution. With the monuments that our ancestors have left in the wild there should be no interference whatsoever—no signs, no footpaths, no car parks, no curator-in-kiosk, Grimspound on Dartmoor, a monument as important as Stonehenge, is just a circle of stones on an enormous moor, 8.

key
1, *St. Magnus Martyr, London.*
2, *Terpsichia.*
3, *Lazise, near Verona.*
4, *St. John's, I.O.M.*
5, *Barnsley, Glouc.*
6, *Pickworth, Rutland.*
7, *Ostia Antica, near Rome.*
8, *Grimspound, Dartmoor.*
a, *Rollright Stones, Oxen.*

7, 8



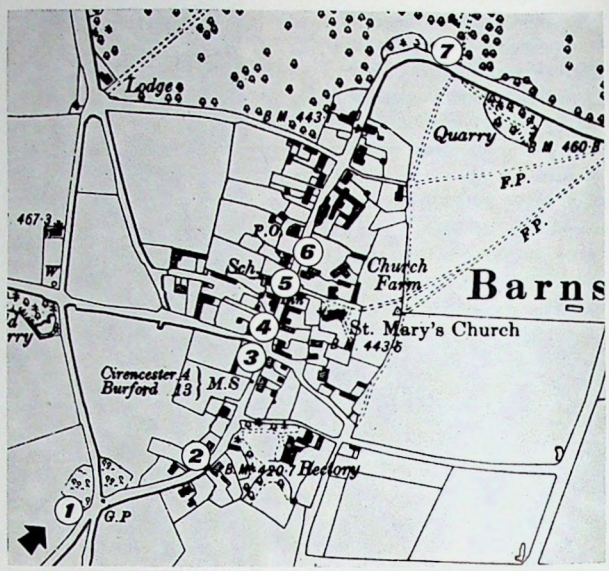
summing up: 1. *This section of the casebook may have seemed to deal entirely with small things, unimportant in themselves. By itself one seat may not mean much; when added to all the other things in this section—walls, railings, a bus shelter, a war memorial—the result becomes very important, because together they make up almost the whole environment. Good architecture helps tremendously, but it isn't vital; certainly good architecture on either side of a windswept boulevard is far less use than indifferent architecture built to a pattern. Here, below, is the centre of Sheepstor, at the end of a valley on the very edge of Dartmoor. It is, magnificently, a place, with incipient wildness expressed in every inch of it, yet the elements which make it so are entirely 'commonplaces'—the seat, the walls, the cross rough-hewn on a rough base, the rocky floor itself, without benefit of asphalt; the farm gate on the left and the churchyard gate beyond. Well-intentioned councils might spend thousands of pounds on trying to import 'character' into their towns and villages (a civic centre? a vast garden?) while all the time the answer is under their noses, buried in the little things like this that nobody bothers about.*

summing up: 2—Barnsley, Glos.

Here is a village which has made itself into one of the most memorable places in Britain, simply by doing everything in a country way and by resisting all efforts to import alien elements. Yet there are no set-pieces, no outstanding buildings or features. It is just an ordinary village on an ordinary A-class road, a situation similar to hundreds of others. They could all be as genuine and as compact as this.

1 **2**

Sequence: through the village from South to North; the viewpoints are indicated on the plan. 1, entry, straight from true countryside—low wolds NE of Cirencester. A sixty-degree bend, 2, takes you into the village street, where everything is in the right place with the right treatment.



3 **4** **5**

The church, 3, appears over farms, not at the end of a floral garden: the cottages are well kept up, the village pub has village-scale trim, 4, and so has the post office and—acid test—the war memorial, 5.

6 **7**

6, down the village street to a right angle bend, followed by a sharp break into true countryside, 7. Simple?—yes, if you follow the common-sense rule of keeping in the village only the things that belong there. (See how the bends into and out of the street, which would be nonsense to a road engineer, give the village ready-made limits which it has respected. Cranked lines like this are a vital part of building-in rhythms, how many are there in the New Towns?)

How it was done: by one of the present owners, Mr. David Verey

'The reason why Barnsley appears as it does is because it has always had landlords who cared for it. The feudal picture continued till the 1930s, when the squire sold the estate, but the bulk of the village was bought back by various members of the family in order to prevent it falling into the hands of speculators. Nearly all the cottages have been or are in the process of being modernized under the improvement grant system, and every cottage is listed under section 30 of the 1947 Town and Country Planning Act as being of architectural or historic interest to preserve the group value.

'During the last five years the village has twice been runner-up in the Bledisloe Cup Competition and last year actually won the cup for the best kept smaller village in Gloucestershire. The only sign I can ever remember was a recruiting poster stuck on the village hall. After the Bledisloe Cup judges had commented unfavourably on it we pulled it down and a respectful army sergeant came later and asked for the board on which it had been stuck.

'The absence of electric wires is because the late Sir Philip Stott of Stanton, near Broadway, paid for them to be put underground. The Electricity authorities have recently put cables across fields near the village but they tried to site the poles carefully and the G.P.O. has also been most co-operative in trying to hide the wires and keep them at the backs of the houses.

'Owing to the improvements to the existing cottages the demand for council houses with their high rents seems to have waned, and I do not now think council houses are required as we do not wish to become a dormitory for Cirencester. The chief difficulty in preserving the appearance of a Cotswold village nowadays is the fact that stone slates for the roofs are only to be got by stripping off some other building. Not one man is employed full time in quarrying stone slates in the county.'

TREES

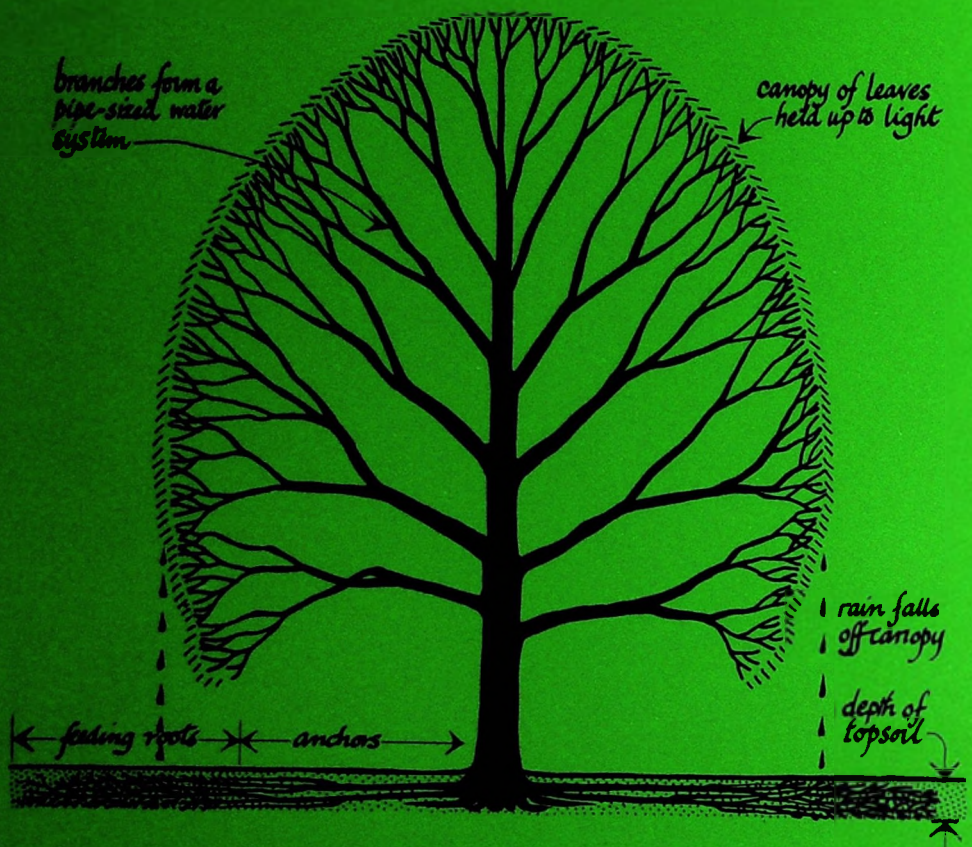
Peter Shepheard

The superb effect of one big tree, properly cared for: Stratton Audley, Oxon.

The trees in our towns are constantly in danger. A dozen practical reasons can be found for destroying them; they can be accused of damaging buildings and drains, cutting off daylight, dropping leaves, harbouring pests, interfering with street lighting, being unsafe. It has recently been estimated that the central London boroughs are losing the trees in their streets and private gardens at the rate of one tenth per annum. This could mean that in a few years' time *no* trees will remain outside the parks and a few protected gardens and squares.

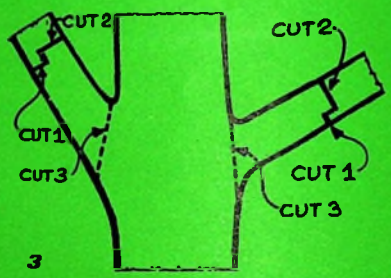
Some of this destruction is deliberate: that caused for example by inability to see the value of trees, or by the development of sites at densities which do not admit trees to be kept. But a great deal is due to maltreatment and damage inflicted through ignorance of the physiology of trees, and often with the best intentions trees are made dangerous or killed by lopping done to make them safe; and it is sad to see how often trees which the architect has meant to preserve die from root damage—from drain trenches or paving or changes of level—which the architect did not know he was causing. The knowledge required to prevent this is not extensive or complicated, and the basis of it can be set out quite shortly.

[*continued on page 885*



1 Diagram of root & branch system

2 SECTION OF TRUNK OR LARGE BRANCH



3 PRUNING OF BRANCHES

Correct cuts to prevent tearing (1 & 2) and to allow healing of wounds (3)

WRONG
LOPPING TO STUMPS

1. Mass of straight branches grows from each cut; cut ends, branches fall
2. Tree shape destroyed & foliage much increased
3. Constant & frequent pruning needed with many boughs to cut each time

RIGHT
THINNING OUT BRANCHES AT THE TRUNK

1. No further growth from cuts which heal over with bark
2. Tree shape preserved & foliage permanently reduced
3. No further attention needed for many years

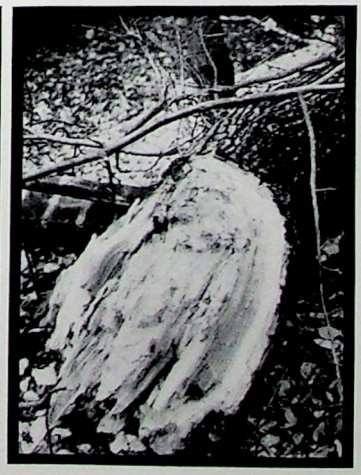
1, *Trees as architecture: Luxembourg gardens, Paris. Limes partly pleached in upper branches, needing fairly frequent and skilled attention.*

2, *the worst kind of lopping, and in a place where no reason for it could exist. The water shoots are beginning to grow and unless very carefully treated, these trees will be rotten and hollow in a few years' time: New St. Pancras' churchyard.*

3, 4

5

Blomfield Road, London, W.9: 3, the trees on the left have been lopped, those on the right carefully thinned. 4, the same trees two seasons later. The 'water shoots' on the lopped trees are 12–15 ft. long. The thinned trees have grown a few inches only. 5, restoration: the same lopped trees after removal of many of the water shoots; if the stumps heal, as they may on a plane tree if carefully shaped, the tree shape can be eventually restored.



6, 7

8, 9

6, an elm, 'topped and lopped' to make it 'safe' in the last stages of dangerous decay. The whole tree is hollow, some of the branches on the stumps have fallen and others are about to. 7, a fallen elm branch showing the thin rim of sound wood around a rotten centre: the rot was caused by lopping higher up the tree. 8, beech and, 9, oak at Kew showing old wounds from branch removal well made and in various stages of perfect healing.

10, *root damage: a chestnut dying from removal of its feeding roots to make a pond in Regent's Park, London; the circle is wide, but not wide enough. The upper branches have been cut back to help, but the damage is too severe and this tree will die.*

11, *pleaching limes at Chenonceaux; very skilful work: the cuts are made a little farther out each year, and even then rot can set in unless great care is taken.*

12

13

12, *planes grown very close (17 feet apart) and lateral branches thinned to make a splendid high avenue, at Chenonceaux: all wounds healed.* 13, *planes on left trimmed to pyramidal shape by cuts made a little farther out each year; horticulturally sound but wasteful of labour and in appearance less pleasing than the planes on the right, planted about the same time and slightly thinned only to preserve their natural shape. Birdcage Walk, London.*

14

15

14, *Cherries at Bideford: only a few years old, and already stunted, misshapen and ugly. This kind of tree is no substitute for large forest trees for which room must be found in our towns—like the willow,* 15: *Windsor.*

16

17

Trees hold sunlight and in towns can serve the useful purpose of bringing it down into the shadows of large buildings. 16, *chestnut leaves lit from behind.* 17, *planes bringing sunlight into Berkeley Square.*

continued from page 381]

Essentially, a tree is a water system, 1. The whole shape and ramification of both roots and branches are designed to carry water from the soil up into the leaves, where it is evaporated into the air; this process, known as transpiration, is vital and it is essential that the amount of water transpired shall be balanced by the amount sucked up by the roots. Damage to the roots, if severe, will cause wilting and death in the branches.

The tree makes the food it needs for its growth by means of the chlorophyll in the leaves, the miraculous green substance which builds up sugars and starch from the reaction of daylight and water. Leaves must have light, and the tree makes great efforts to hold all its leaves out to the sky, making a roughly globular canopy, not a dense mass.

The roots spread out radially from the trunk in a shallow layer in the topsoil, seldom more than two or three feet deep. Some trees have tap roots going deeper into the subsoil, but these are for anchorage. The thick parts of the radial roots near the trunk are mere anchors also, all the water being collected by the fine fibrous roots which fan out at the edges of the radial system, especially just under the tips of the branches where the rain drips off the leaf canopy. It is these outer feeding roots which are vital to the tree. Any digging of trenches or changes in level within a circle of at least the diameter of the leaf canopy, and often much larger, will do more or less damage to the water supply. Extensive root damage will kill the tree; if a part only of the system is damaged, pruning of the branches to a corresponding extent will put the transpiration system in balance again and help the tree to survive.

The feeding roots must operate in *topsoil;* that is, soil rich in organic matter, porous, containing oxygen and full of bacteria whose activity, especially in the fixing of atmospheric nitrogen, is essential to the process. If the entry of oxygen into the soil is cut off, by a tarmac carpet, or by waterlogging, or by a raising of the ground over the root area, the root action, and the bacterial action on which it depends, will cease. A very common cause of death is the raising of the ground level round trees, especially by the spreading of heavy soil. It is sometimes thought to be safe to do this if a well is left round the trunk; this is not so, as the feeding roots will still be damaged. If a raising of the ground is essential, it should be in porous shingle or gravel which will allow air to get to the topsoil layer.

The water, bearing minute but essential chemical elements in solution, is carried up the trunk and branches to the leaves mainly in a layer of cells called the *cambium* which lies, like a pale green and juicy sleeve, just under the bark, 2. The cambium forms a layer of wood on its inner side each year, the *annual ring*, and bark on its outer side which cracks and expands as the tree grows. The wood is more or less inert—the structural core of the tree, hard and tough unless attacked by fungoid decay. The cambium, only a few millimetres thick, is the vehicle of the tree's circulation system and of its growth, and a cut a fraction of an inch deep round the trunk or a branch, severing the cambium, will kill everything above it if it is not healed at once. A constriction, such as a wire or an old tie round the trunk or branch, will have a similar but slower effect. The cambium has remarkable powers of healing and will creep back over wood exposed by a fallen or cut branch and restore the bark; all good tree pruning relies on helping the cambium to do this and seal the wound before fungi and bacteria begin to rot the exposed wood. The cambium cells also tend to form new shoots when injured or cut; this tendency is very strong in the smaller branches, but almost absent in the trunk.

An understanding of the properties of the cambium is the key to good pruning. In principle, the best pruning is no pruning. A healthy tree in good conditions of soil and situation will do finely without ever being touched by the saw. Much tree surgery, as much human surgery, is done to amuse and gratify the surgeon. Sometimes, however, and especially in towns, careful pruning is a good thing, 3. A large tree in its natural state will tend to kill out its smaller inner branches by overshadowing them; this process of thinning can be helped by pruning as the tree grows. Low branches are often not wanted near roads and paths; trees may grow irregularly through damage by smoke pollution, or by overshadowing by buildings or other trees; in such cases pruning is essential. Much more difficult, and often attempted, is to keep large trees to a modest size by pruning; this is seldom satisfactory except with trees such as plane and lime which stand cutting extremely well, and even with these it is better to do it continuously and in a frankly artificial manner as in the French systems of pleaching, 11, rather than by the desperate periodic lopping which disfigures so many English streets.

It is important to remember the difference between a cut on a branch, leaving a stump, and a cut flush with the trunk. If a stump is left, the branch cambium will make many new shoots; these will grow out rapidly, sometimes 6 or 7 ft. per year. Meanwhile the cambium has great difficulty in creeping over the cut stump and forming new bark; the stump, exposed skywards to the weather, is attacked by fungi and bacteria and begins to rot; the rot spreads down inside the stump into the trunk and can eventually render the whole tree hollow. The stump in a few years bears 20 or 30 branches where one grew before, all attached to the rim of the rotten wound, from which as they gain weight they will break and fall. The lopping, instead of making safe, has made the tree really dangerous, 2 and 6, and nothing can be done at this stage to preserve it. If, however, a *second* cut is made, taking the stump off flush or nearly flush with the trunk, the cambium makes no shoots, or a very few which can be removed easily the following year. A smooth oval wound is left which the cambium will cover neatly, 8 and 9, rolling in from the sides to seal the wood with new bark before rot sets in. A mild antiseptic and waterproof dressing such as plastic bitumen or plain coal tar helps to prevent decay of the exposed wood until the healing is complete; strong disinfectants, such as creosote, may damage the cambium and retard healing.

Careful removal of a few branches in this way can do much to lighten and improve town trees, and undoubtedly helps to prolong their life, 4; the planes in the London squares are excellent examples.

Apart from mutilation by bad pruning, there are of course many other things which make life hard for a town tree. Restricted root space, hard and impervious pavings; draughts caused by the funnelling of wind between buildings; lack of light from overshadowing by buildings; atmospheric pollution (both directly and in cutting off sunlight); poisoning by gas main leaks (a minute trace is enough) and by petrol and salt washed off roads; the drip from copper telephone wires; all these and many more will damage trees, and tend to limit the kinds of trees suitable for town planting to certain robust and resilient species. But of all these troubles the most serious is impervious paving. Many of our great town trees grew to maturity before the invention of tarmacadam and concrete pavings, and with their established root systems they survive better than newly planted trees can ever hope to do unless special efforts are made to set them in grass or in pavings pervious to both rain *and air*, such as gravel, cobbles, or open jointed slabs.

Trees weakened by town conditions become liable to various diseases. In general, these are secondary to the causes of damage quoted above; a healthy tree can withstand most of them. Caterpillars can do serious damage in town conditions where birds and their other natural enemies are few, but healthy trees usually recover rapidly from this kind of defoliation. Probably the most serious menace to urban, and indeed all other trees, is the honey fungus *armillaria mellea*, a brown

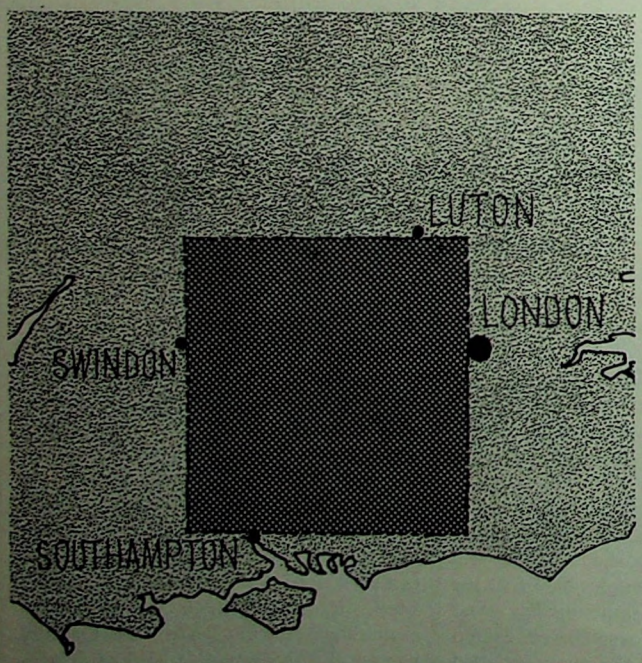
mushroom, sometimes phosphorescent, with a black bootlace-like rhizomorph, which attacks roots and bases of trees, killing them rapidly; it operates most fiercely in the badly drained and de-oxygenated soils often found in towns.

Quite as important as the preservation of old trees is the planting of new ones. Above all, we need *large forest trees*. Small trees, however decorative they may be in certain places, are no substitute for big ones. It is specially sad that so much reliance is placed on the pink varieties of the Japanese cherry, garish in flower, gawky and dull-leafed when not, and short-lived as well, 14. Flowering trees should be chosen for form as well as colour, and should come in groups against a background of larger, preferably evergreen, trees against which their flowers can be seen; out amongst the houses on the by-pass they make rather than mitigate subtopia. On the other hand the great forest trees will dominate the most chaotic urban mess and create an urban landscape where the buildings have failed.

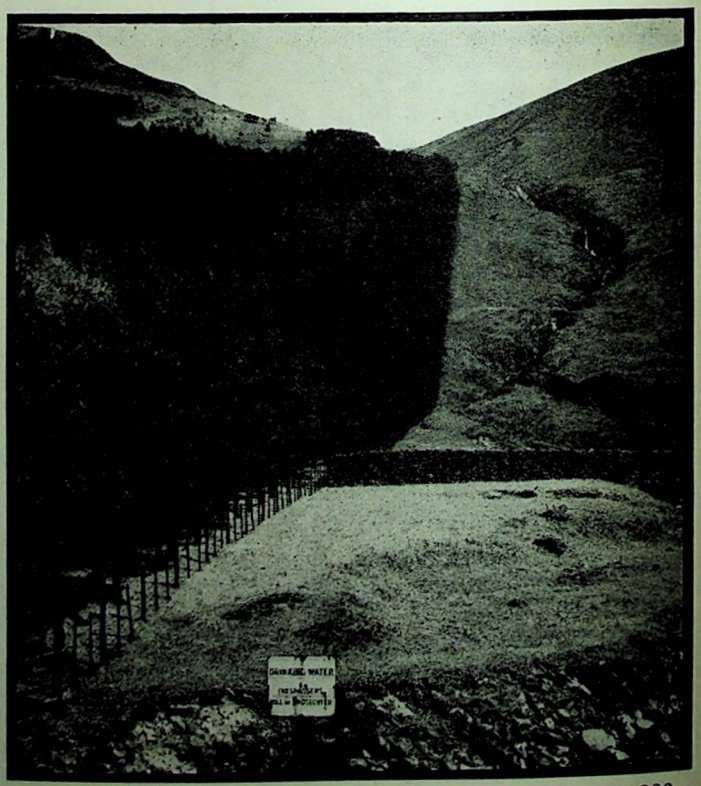
Town trees should be robust in constitution, fairly quick growing, and long-lived. The last two qualities are contradictory: usually quick-growing trees decay early and become dangerous within a century. Best of all are plane, lime and horse chestnut; and I would add three more of specially distinctive character, the tree of heaven (*ailanthus*), the locust or false acacia (*robinia*) and the ginkgo. Even this to my mind impeccable list may be criticized—the plane for distributing its throat-irritating seed hairs, the chestnut and ailanthus for casting their big leaves on roads, and so on; but let no one suggest that the trees are not worth putting up with such minor annoyances. If very quick growth is essential, use the willows, 15, and the poplars; not the Lombardy poplar so much as the black, the white and the large-leaved balsam poplars. Remember, however, that as well as being short-lived, the willows and poplars are extremely thirsty for water, and can dry out (and hence shrink) heavy clay soils to cause shifting of foundations and serious cracking of buildings. This—almost the only way in which buildings can be damaged by trees—does not apply to light non-shrinkable soils, or even seriously to clay soils with other trees than the poplars, the willows and to a lesser extent, the ash.

Above all, what is needed is a plan for planting and maintenance of trees and someone to carry it out. Space must be found in old towns, and left in new ones, for forest trees. The plan must consider trees not only as blots on a paper pattern, but in perspective as part of the scene; as the raw material of a work of art. And as a material trees are vastly different from the rectangular and linear shapes of architecture. Trees vary with the seasons; they absorb light rather than reflect it as buildings do; they can be sunlit from behind, 16, and appear flooded with light against shadowed buildings or other trees, 17; they create enclosures of vast height and size, and yet leave views between their trunks—trees are *always* on pilotis! Trees grow and decay, and the work of landscape art has therefore to be adjusted and amended through centuries of existence. In short, a townscape with trees is a work of great complexity, needing an artist not only for its creation, but for its maintenance as well. It is no fault of the Borough Engineer, that most worthy and hardest worked of all officials, if his tree schemes go awry; what every town needs is a landscape architect, or at least a town verderer, in charge of *all* its trees, whether in park, square or street.

Trees can make an urban landscape: badly selected and planted they can obliterate the countryside. Below left is the equivalent of the grotesque area planned to be covered by new Forestry Commission planting before the end of the century: below right is how most of it will look. Geoffrey Kelly's article opposite ☞ attacks both the end (a left-over from the submarine blockade) and the means of afforestation—the chicken wire, the curt notices, the complete disregard of landscaping.



The dark area represents three million acres—that is equivalent to the area of new planting proposed by the Forestry Commission in the next forty years. In addition there is to be two million acres of regeneration and replanting: a large proportion of this is likely to result in a blanket of conifers too.



Geoffrey S. Kelly

AFFORESTATION v. LANDSCAPE

A REVIEW OF THE AIMS AND METHODS OF THE FORESTRY COMMISSION

Not since our Neolithic ancestors began clearing the indigenous forests to found an agriculture and a landscape which succeeding generations developed into the finest in the world has the face of Britain been threatened with as fundamental a revolution in appearance as the afforestation policy of today will effect if it proceeds unchecked, especially in our mountain areas.

The importance of trees in the composition of any landscape can hardly be exaggerated, and our own familiar lowland pattern of arable and pasture land, laid in a mosaic of fields bounded by hedgerows and an occasional small wood, derives most of its charm from the infinite variety in colour, form, and placing of its trees.

In the north and west, where small-scale lowland intimacy expands into a broader sweep of stone walls and heather-covered mountains, the power of trees to make or mar their setting is absolute, and here, like humanity, they are usually more acceptable singly or in small groups than in massed battalions.

A few Scots pine bent and battered by the winter winds that scour their Highland glen, a stand of sycamores on a Lakeland fell, or a small oak-wood in a far Welsh cwm, can each give profound articulation by their visible conformity to the very different landscapes in which they are set. They provide scale and also an unobtrusive hint of ageless human influence upon backgrounds which might otherwise intimidate through their very emptiness.

Afforestation has exactly the opposite effect: it creates scenic claustrophobia. Like every other industry, it imposes its own distinct pattern upon the landscape which is inescapable. But unlike farming, whose noticeable interference with the background diminishes as its remoteness increases, forestry tends to obtrude increasingly upon the environment the wilder it is. The result, in a tiny island like Britain, where space and solitude have become invaluable to an overstressed population, is liable to be psychologically, as well as scenically, disastrous. We shall be progressively denied mental relaxation and ultimately unable to find spaciousness in our natural surroundings on a scale greater than a municipal park.

To leave the packed cities for a while and look for relaxation in the hills only to find them even more packed with conifers, through which it is as exhausting to struggle as during the rush hour, and whose clamorous patterns dominate the view from every valley and from any summit they have not made inaccessible, is an appalling thought. But it is inevitable if afforestation claims more and more of the highlands of Britain 'in the national interest.' Only the interests of Bedlam could destroy an environment in order to create the wealth to enjoy what has been destroyed.

Moreover, it is not a paying proposition to grow conifers on land, however poor, which is raising sheep. All such land could, as Sir George Stapledon has proved, double or treble its production if a fraction of the capital to be tied up in afforestation were diverted to modern methods of soil and stock improvement.

Strategically, our afforestation policy is equally unrealistic. It is a legacy from 1916, when at the height of the submarine campaign a committee under Sir Roger Acland was set up to examine and report upon means of ensuring a strategic reserve of home-grown timber. Pit-props were a vital necessity forty years ago to enable us to mine the coal upon which depended not only our ships, railways and armament production, but indeed our entire industry. As a result of this report, the Forestry Commission was formed in 1919 and given an afforestation programme of 1,700,000 acres which was intended to provide a three-year strategic reserve by about 1980. This programme (which reached 1,000,000 acres this year) was re-examined in 1943—during another submarine campaign—and a figure three times that of 1916, 5,000,000 acres,* fixed as the desirable objective of the next 50 years. But that was two years before two A-bombs dropped on Hiroshima and Nagasaki finished a six-years global war in as many days, and made the probability of any future major war lasting much longer seem as likely as that we should ever need battleships again. The H-bomb has since made that grimly clear to the extent of closing Scapa Flow, which even as recently as 1948 would have been unthinkable. But the 1916 Acland Report is still the basis of our afforestation policy.

Afforestation is but one casualty of a coal era that is becoming as obsolescent as the age of cheap labour that conceived it. How rapidly we may judge by two statements made recently by one of the principals of the Atomic Energy Research Establishment at Harwell that 'atomic power from Calder Hall when functioning fully will dispense with the 4-5,000,000 tons of coal now required to generate the same amount of electricity,' and 'Denmark's fuel for a year can now be carried in one small aircraft instead of seven ships laden with coal every week.'

Food production is now our greatest concern and will become increasingly so. Consequently we cannot afford to waste one acre on conifers taking at least sixty years to mature when we could produce mutton, lamb, and wool of far greater value at far less cost, leaving our diminished capital resources for investment in more immediately promising and less problematical projects than ensuring supplies of timber for posterity.

The total land area of England, Scotland and Wales is 56,000,000 acres. We have the highest population density in the world, that for England and Wales being 750 to the square mile compared with a world density of 46. We have already almost 4,000,000 acres of productive woods; to add another 3,000,000 is inviting starvation. We just dare not risk taking all that land from food production.

Afforestation, driven largely to the hills because of dearer land values elsewhere, not only occupies the lower and potentially richer land there up to the 1,500 ft. contour, thus denying it to sheep, but it also sterilizes the poorer and higher ground, which should be used as a seasonal food supply (instead of being partially occupied all the year round), and intensively grazed during the summer and autumn. This improves the quality of the grazing, keeps it in good heart, and prevents the spread of the coarse molinia and nardus herbage, which, if not closely cropped, extinguish the valuable fescues and heathers. In autumn the stock, which should include a complement of cattle as well as sheep, is brought down from the high ground to selected sheltered pastures in the valleys which were left in the spring to regenerate, and where silage and perennial grasses are now ready to keep the breeding stock, and any others retained, during the winter.

It is apparent, therefore, that even partial afforestation of our mountainous areas destroys the possibility of economic food production on what is left, which degenerates into subsistence grazing, the grazing progressively deteriorating through lack of intensive supplies during the summer, as sheep are selectively

* 2,000,000 acres to be regeneration and replanting of existing woodland, 3,000,000 acres to be new afforestation.

grazers. Scenically this has the dismal effect of turning the beauty of 'black' or heather mountains into the drab uniformity of 'white' nardus or mat-grass mountains. The combination of withered grass slopes above sombre green coniferous slums is as horrible visually as it is unpardonably bad husbandry.

As individuals and as a nation we must now decide whether it is saner to import food or to import timber. Should increased home food production be sacrificed to a long term afforestation programme of doubtful value?

The answer has never been more clearly demonstrated than by the recent impressive exhibit by the Ministry of Agriculture at the Royal Show. The title and theme of the exhibit was 'Meat from the hills' and it provided a devastating indictment of the folly of assuming that our highland areas are more suitable for afforestation than food production. 'The five million acres of upland grazing in England and Wales,' the Ministry hand-out stated, 'provide summer pasture for much of our breeding stock of sheep and cattle. Farmers in many parts of the country, particularly in the north, look to the hills for their main source of raw material for the production of good beef and fat lamb. Hill flocks are the foundation of Britain's sheep industry. They are the reservoir from which, year by year, directly or indirectly, the commercial lowland flocks are renewed.' Yet from this vital 'reservoir,' in Wales alone, at least 800,000 acres are coveted by the Forestry Commission, and indeed must be obtained from the hill farms if the afforestation programme is to reach its new objective.

Such a confliction of national interests shows the confusion behind our State afforestation policy. It does not necessarily mean that there should be no afforestation in the hills, nor that timber, of the right kind, in the right place, in the right amounts, may not be a national asset both scenically and economically. The Forestry Commission, moreover, cannot be blamed for doggedly implementing what is now seen to be an outdated and misguided policy of mass afforestation, as this was largely due to initial misdirection.

The biggest mistake was to embark upon the wholesale coniferization of Britain as if it were a continent. The preposterously excessive scale of this may be better appreciated if compared with official figures recently published by the Coast Woods Trade Extension Bureau, British Columbia, which state that in this famous timber-producing province, about four times the area of Great Britain, '10,051,000 acres of land are considered suitable only for the perpetual cultivation of forests.' Yet that is the home of Pacific Coast hemlock, Douglas fir, Western red cedar and Sitka spruce, and it is the permanent extent of such vast Canadian forests and their famous timber industry supplying world markets which we are trying to emulate in this small island.

If the 1943 afforestation programme were added to our present area of woodland we should have nearly 70 per cent of the figures for British Columbia!

Lesser errors of British afforestation, just as much the result of over emphasis on a single-minded objective, were made in the deliberate creation of large even-aged pure woods of conifers which sound European forestry practice now condemns, and which are rarely found in nature except where extreme conditions of soil poverty, climate, or altitude permit only one species to survive. In the natural forests of British Columbia for instance, the mixture in virgin timber stands is Pacific Coast hemlock about 30 per cent, Douglas fir 24 per cent, Western red cedar about 26 per cent, and Sitka spruce and others 20 per cent.

The familiar Forestry Commission style of planting in large blocks, groups, lines and strips, in collections of pure woods of even-aged conifers, as well as creating eyesores, is extremely vulnerable to insect plagues, disease epidemics, wind-break, snow-break, and fire hazards. Also it is liable to cause soil deterioration through the working out of soil nutrients from lack of humus decomposition and for other reasons. As Lord Bolton states, 'the leaf-fall from conifers does little to maintain soil fertility, and in the case of many soil types it causes definite deterioration. The leaf-fall of broad-leaved trees, on the other hand, has a markedly beneficial effect so far as soil improvement is concerned.'

In order to obtain regular and continuous output, forests must be organised so as to contain woods and timber of such several types and ages as to form a regular succession from which the required periodic supply for marketing may be obtained. This demands the mixed wood, at its best when the mixture is an intimate one of very small units such as single trees or small groups, so that apart from any aesthetic reasons, good silviculture condemns the large even-aged uniform plantations which smear our landscape such as at Thetford Chase in Norfolk and Suffolk. Here is a 36,000-acre eyesore, a vast timber factory as deadly as any industrial squalor of the nineteenth century, and as closely akin in origin. Both stem from the Philistinism of uncontrolled development and a rejection of any objective other than monetary exploitation.

Even more titanic Thetford Chases are inevitable unless we admit that the 1948

Here is the balance sheet for afforestation v. hill farming:

	£
Cost of afforestation of 3,000,000 acres (@ £59 per acre, the present average official figure) ... ... =	177,000,000
Maintenance costs over yield period of 60 years at £3 10s. per acre per annum ... ... =	630,000,000
The total yield at the end of 60 years including the value of all thinnings, etc., could be expected to be worth 2s. 6d. per hoppus foot (although the official figures for 1954 only gave a net return of 1s. 4d.) which at £1,125 per acre of 9,000 hoppus feet ... ... =	3,375,000,000
Deduct maintenance costs ... ... =	630,000,000
∴ net return from investment of £177,000,000 in afforestation over period of 60 years ... ... =	2,745,000,000
Equivalent return from £177,000,000 at 4½ per cent compound interest ... ... =	2,832,000,000
***Net loss* from afforestation** ... ... =	**87,000,000**
But this land raises sheep, the return from which, without any improvement of the land or investment of capital, averages £3 per acre, which over 60 years gives a clear profit of ... ... =	540,000,000
∴ **the *total loss* by afforestation of 3,000,000 acres of our present rough grazing and mountain pasture** ... ... =	**627,000,000**
If, however, £59 per acre were invested in improving the land for agriculture instead of afforestation, the return over a period of 60 years would be as follows:	
Initial investment ... ... =	177,000,000
Repayment completed within 20 years, including interest charges at 4½ per cent. Value of trebled livestock production at, say, £9 per acre over the remaining 40 years ... ... =	1,080,000,000
To this must be added the return from the released initial capital of £177,000,000 at 4½ per cent C.I. over the remaining period of 40 years =	1,026,000,000
∴ **the gross loss through investment in afforestation instead of livestock production is more than £2,000,000,000 over even a minimum yield period of 60 years, which is equivalent to an annual loss of over £33,000,000.**	

programme was more symptomatic of the panic planning of the Age of Anxiety than of clear thinking and amend it accordingly. Having decided our current programme is absurdly ambitious it should be a simple matter to revert to the 1916 objective of 1,700,000 acres as only 1,000,000 acres of this had been planted by this year. Therefore nobody is going to suffer by such a realistic adjustment, as even at the present rate of afforestation it would be 1984 (a rather ominous date) before it could be completed.

A reduction to the 1916 acreage would not, however, automatically ensure satisfactory afforestation schemes in the future. The Forestry Commission is too deeply committed to its coniferous crusade regardless of considerations other than the limit of its annual Parliamentary grant—a sum voted to cover the mounting losses of the Commission, which in the latest published figures, those for 1954, were £7,850,000—a 10 per cent increase on 1953. Apart therefore from the limitations of the Parliamentary grant the Forestry Commission is almost independent, as it is not under the full direction and control of a Ministry. It is also chronically insolvent, and is consequently driven to constant propaganda, boosting its future expectations in order to persuade the taxpayer to subsidize its present losses.

The most immediate and satisfactory amendment would seem to be that the present virtually independent status of the Forestry Commission, by which it can browbeat local agricultural interests and even Whitehall Ministries into agreeing to unsuitable afforestation schemes, should go. The Forestry Commission should become a department of the Ministry of Agriculture and Fisheries, divested of its present dictatorial powers of requisition. It must also curb its partiality for purchase by infiltration, which often prevents the potential young farmer buying and improving hill farms back to their once prosperous conditions but now almost derelict from neglect and old-fashioned methods (about the only way he can start on his own), because the Forestry Commission's agents acquire these farms from their aged owners before they come on the open market.

By a recent redeployment of District Officers it is even possible to find their offices in buildings serving as local Headquarters of the NFU. These and similar infiltration tactics leave the outsider no chance, and are one of the reasons why unsuitable afforestation schemes may reach an advanced stage with everything 'fixed between friends' before the public has a chance to protest. Under the more comprehensive policies and realistic control of the Ministry of Agriculture, it should not be difficult to eradicate such practices and to integrate afforestation completely with agriculture instead of forcing it to compete by fair means or foul as at present.

It is difficult to see why this was not done from the beginning instead of setting up an independent Forestry Commission. One cannot believe, for example, that setting up a Schools Commission as a panic building measure in 1945 would have achieved anything but chaos. Especially if it had been so powerful as to be practically independent of the Ministry of Education, absolutely beyond the control of the Local Education Authorities, and vested with arbitrary and comprehensive powers to requisition sites for schools, including those already being used for educational purposes.

Possibly the very similarity provides the answer. The effective organization by which the Ministry of Education leads in research and methods of school building could well be used as a pattern for the treatment of afforestation within the Ministry of Agriculture, which could augment its architects' department with an afforestation team as enthusiastic and effective as the schools design and development team at the Ministry of Education. Such a team could work in close conjunction with the Agricultural Land Service, the National Agricultural Advisory Service, and all other branches of the Ministry. They would also be able to advise County Agricultural Officers and to work in liaison with County Planning Offices, as well as being able to help private landowners. They could write a series of afforestation planning bulletins similar in scope to the Ministry of Education building bulletins, and assist as necessary in preparing forestry pamphlets.

Another stage in our re-appraisal is to decide that even apart from agriculture or aesthetics, our mountains have far greater recreational value, both for our own population and as a dollar attraction, than their monetary worth as timber factories. From these basic assessments it should be possible to formulate a realistic afforestation policy which, both in broad outline and in essential details, could be planned as an integral and valuable part of our civilization; not merely an anachronistic adjunct, an expensive hobby masquerading as an economic necessity.

Although relegating the Forestry Commission to the control of the Ministry of Agriculture and Fisheries is most desirable, it is even more essential to put all major afforestation schemes under the control of the Town and Country Planning Act, like any other types of large-scale industrial development. This should be done straight away. It would stop the present farcical situation in which the National Parks, areas designated as such 'because of their outstanding natural beauty,' are being irretrievably ruined by incongruous afforestation. As for instance in Snowdonia where in reply to protests about one scheme the Welsh office of the Ministry of Housing and Local Government responsible for protecting the National Parks stated 'proposals for afforestation by the Forestry Commission affecting land in the Snowdonia National Park are not submitted for the Department's approval or observations.' Why not?

In order to save what is left of the National Parks from final ruin we must stop immediately all further afforestation in them until each has been competently surveyed and any areas considered suitable for afforestation designated, subject always to the overriding considerations of agriculture and scenic quality.

There is no reason why the changes recommended should not greatly benefit all interests, including those of the Forestry Commission, which, if it were relieved of the fantastic pressure of the 5,000,000-acre programme and suitably reorientated, could devote itself to becoming not only an economic asset by carrying out a reduced programme, and by advising upon the tending and replanting of our present woodlands and their conversion to sounder production cycles and yield programmes (as for instance in the recently issued report of the Committee on Hedgerow and Farm Timber, which is wholly admirable), but by the properly planned planting of areas requiring wooded relief afforestation could exercise a most welcome influence upon our landscape instead of a threatening menace as at present. Indeed, it might almost become an 'amenity' which, to use the Forestry Commission's own description, 'evolves from a compromise between pleasure to the eye and an appreciation of the right use of land; amenity follows not from doing what looks best but from doing what is required in the way that looks best.'

To achieve this transformation, however, will require more than a mere reduction in acreage to be planted—it demands an entire change in outlook upon the part of all connected with forestry. It would be worth the effort, for the result could be a new landscape charter for Britain.

It would be startling and effective. There would be no more jerry-planting, no more Sitka slums, no ghastly firebreaks. No granting a local junior official a sum of money with which to plant as much land as possible. Wire fences could be unobtrusively sited, planting boundaries contoured properly, species chosen for their fitness for all purposes, not merely for the sole purpose of soil exploitation. To quote Lord Bolton again: 'There is no soil type capable of growing a profitable crop of conifers which is not also capable of maintaining healthy broad-leaved trees.' The deciduous tree might come back into its proper heritage.

There are many areas suitable for birch, and others for poplar (the latter yields even quicker returns than Sitka), that would be enhanced by such deciduous planting, where coniferous intrusion could be disastrous. Foresters given sufficient training and guidance in the elements of landscape composition would in time appreciate this. They would have learned that there are basic and simple components which give quality to any landscape and by which it can always be analyzed aesthetically. These can be grouped under about half a dozen headings such as scale, texture, colour, variety, pattern, and character. In consequence the principal components of outstanding beauty or appeal in any landscape may be examined and the effect of any proposals to alter these analyzed and assessed reasonably accurately. Which, of course, makes nonsense of the contention often heard that afforestation aesthetics, or 'conifers versus deciduous' are solely matters of individual taste about which there are many differing opinions—differences of opinion there may be, but by reference to objective scenic analysis they can be impartially tested and proved right or wrong. It might help to give a series of simple afforestation-project test-questions for the guidance of laymen on planning committees. The first group should be economic, as we are a commercial nation. What is the present use of the land? If it is not being used for food production, why not? If it is incapable of food production, could it be made productive by expending the same amount on it as afforestation would cost? Has the district considerable scenic attraction? For natives only? For dollar tourists? Will afforestation enhance the amenities? Which really means will large plantations of trees improve the appearance of the district? Does the Planning Officer approve? Has he applied the 'basic six' test? These are the six questions mentioned above, and it might help to demonstrate their application by using a recent specific instance in a National Park—where, of course, they should not have been required, as this stage of having to apply them should never have been reached. The land was in a particularly lovely valley, and was being used for agriculture. It carried about 600 sheep and was capable of improved production, but afforestation destroyed any possibility of improvement above the tree line, and indeed threatens the rest of the valley with dereliction. The Forestry Commission were asked to release this land so that it might return to agricultural use, and they refused. This is a text-book example of the 'mass application of misunderstood principles,' not only by officials but by specialists, some of whom (rather surprisingly) act as advisers to both critics and criticized, and (even more surprisingly) do so without apparent qualms, professional or ethical.

The reasons for opposition to coniferous afforestation in this specific case, which apart from being a violation of the general principles of the National Parks Act was in addition, of course, bad husbandry, were easily adduced from the 'basic six' test. These gave the following results in simple non-technical terms.

1. *Scale.* The scale of the valley, at present set by small mixed woods of deciduous trees, merging into an upland of heather, will be destroyed, and the mountain background dwarfed.

2. *Texture.* The existing soft and scumbled texture of both middle distance and background will be replaced by harsh regularity of conifer spikes.

3. *Colour.* The colour, at present mainly in the subtle brown and neutral ranges with exactly the right amount of chroma relief in the purple-reds of the heather and the contrasting green-yellows of deciduous trees and scrub, will be totally unbalanced by coniferous masses in the green and blue-green ranges.

4. *Variety.* The seasonal variation which is such a marked feature of this valley due to the heather, grasses and deciduous trees, will be lost.

5. *Character.* The character of unspoilt grandeur and remoteness from urban activities, now so valuable a feature, will be spoiled by the congested mechanical layout and all the ancillary activities of commercial plantation.

6. *Pattern.* The general landscape pattern will be violently disrupted and this will be intensified by the Forestry Commission's proposals to introduce a variety of planting areas (as distinct from mixed plantations) the result of which will be to produce a number of large-scale blotches which will not merge even with a distant background and will always obtrude upon the foreground and middle distances.

Large-scale camouflage could be afforestation's greatest opportunity to cover mining operations, spoil heaps, quarries and waste land, service camps and dumps. The provision of screens for camping and caravan sites, and refuse-disposal tips, and replanting of scarred areas after open-cast coal or ore extraction. The chance to make industrial derelict areas bloom if not with roses at least with poplars. None of these chances has yet been taken. There is not one instance—in forty years and a million acres—of a Commission plantation sensibly used and sensitively sited to achieve anything more than the extraction of the utmost fertility from the soil, leaving it more impoverished than if it had never been coniferized.

The sad list could be continued with the lesser opportunities equally bungled: the awful trim, the fire notices and wire fences which, with the fire-control towers and their network of telephone wires, destroy any illusion of remoteness other than that of a concentration camp; the unplanned scars, visible across several counties, with which the drainage ditches tattoo our finest hills and mountains, preparatory to final immolation in coniferous mourning; the pathetic attempts to 'provide amenity' by planting the most incongruous borders of exotics to the Sitka slums, like grafting peacock feathers on a crow; the provision of 'view-points,' like peep-holes on the pier at 'What the butler saw.'

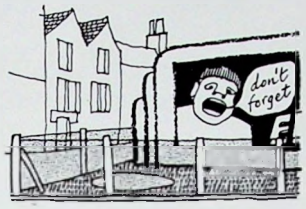
These mistakes stem from a fundamental ignorance of, and an occupational hostility to, the principles of design. They will not unfortunately be eradicated just by sending foresters on landscape design courses, however desirable this might seem, any more than jerry builders could be transformed into rivals to Mies or Corb, by a pep course at the AA.

The conclusions seem inescapable. Design the schemes for the foresters to plant, having first settled an acceptable national plan for state afforestation which would integrate it with agriculture, and ensure that it is planned upon a realistic basis to conform not only with the changed international, strategic, and economic conditions of the Atomic age, but with the altered national values which automation, and consequently more leisure, will give to every claim upon open space in our already over-crowded countryside.

This article has ventured to suggest the outline of a practicable way in which this could be done. The detailed execution could be extremely flexible. In many cases individual schemes, which it must be remembered would have to include roads and drainage layout, and the design and siting of forestry buildings, houses, saw mills, pulp mills, etc., could be prepared by local architects and landscape architects, subject to the approval of the headquarters team at the Ministry of Agriculture, in much the same way as private and local authority architects now submit their school designs to the Ministry of Education for approval. All projects of any significance should also automatically be referred to the county planning authorities.

Whatever the changes in organization and administrative procedure are to be, they must be adopted urgently before the present intentions for wholesale afforestation of our hill and mountain areas are put into effect. Otherwise we shall find that our bureaucratic Dumbiedykes have debased into coniferous officialese such remnants of dignity and grandeur as are still possessed by what was once the loveliest landscape in the world.

advertising



Caution: not breaking open the town.

Metropolis	Clinging to buildings, ***2;*** or to the street itself, ***1.***
Town	Tailored to the building, ***3*** or ***4;*** or small and neat, ***5*** and ***6***. Never a hole in the town, ***a.*** Reduced in scale for country towns, ***7*** and ***8.***
Arcadia	None—it shatters the illusion.
Country	Very little in villages, to village scale, ***9*** and ***10*** overleaf. None in open country.
Wild	Never in any circumstances, ***b.***

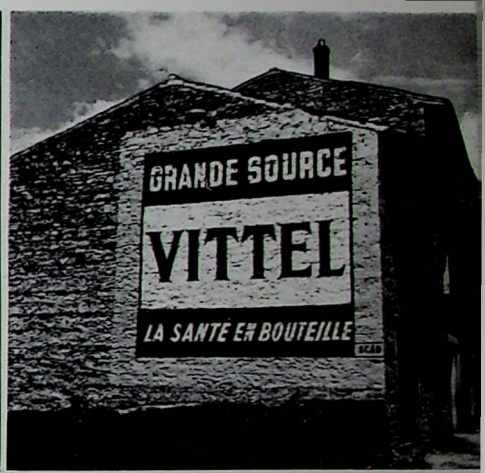
In open country and the wild advertising is alien anyway because it is an urban import, in arcadia it does more than simply add a disturbing element—it strikes at the heart of the suburban illusion. But towns are enriched, not spoilt, by advertising if it is fitted into the

a

urban pattern. In a ***1, 2, 3*** *metropolis, this means jamming the ad. under the sidewalk,* 1, *or having it clinging to the buildings,* 2, *fitting in where it can because all the big spaces have been used already. In a town the pressure on*

b

space is less but the need for fitting into the pattern remains the same—whether it is painted on a wall, 3, *imaginatively arranged* ***4, 5, 6*** *to fit the facade,* 4, *or kept small and pasted on kiosks,* 5 *and* 6 *(which the eye then reads as points of colour in the street).* 5 *is a phone box as well—thus saving a little more space, making one more object do two jobs. The typical English way, a, is to find or make a hole in the town, dump an ill-shaped advertisement in it to make a thumping big interruption and then finally break the urban unity* ***7, 8***

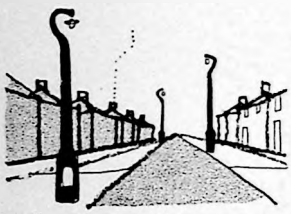


advertising cont.

by adding suburban planting in front. In smaller towns, the touch needs to be subtler—advertising in country towns needs to be less strident, more personal, more carefully fitted to the building, 7 and 8, on previous page and villages can stand a very little advertising, 9 and 10, which should be an indistinguishable part of the texture of the building: as 10 is by design and 9 by accident combined with brilliant positioning.

key: 1, Rome. 2, Turin. 3, Morestel, near Grenoble. 4, Tewkesbury, Glos. 5, and 6, Zürich. 7, Stowmarket, Suffolk. 8, Winsford, Cheshire. 9, Holt, Norfolk. 10, Sandwich, Kent. a, Northwich. b, Little St. Bernard Pass. **9, 10**

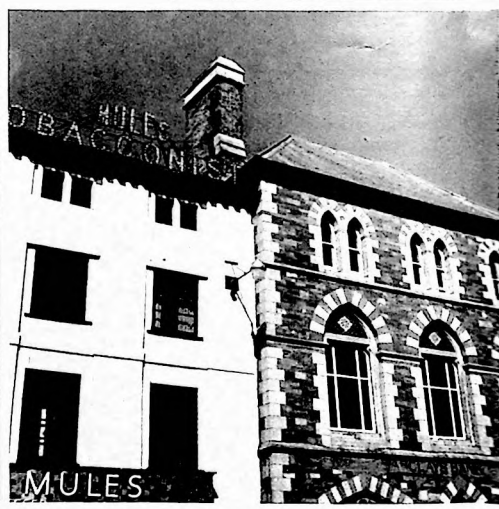
street lighting

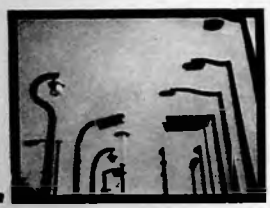


Caution: not thick obtrusive verticals.

Metropolis	wall brackets, ***1.***
Town	wall brackets, ***2*** and ***3;*** or thin standards, ***4-7.*** Never thick and clumsy, ***a.***
Arcadia	small scale and light, ***8*** and ***9;*** not clumsy. ***b***
Country	in the villages indirect lighting, ***10;*** or intermittent points of light, ***11.*** None in open country.
Wild	none.

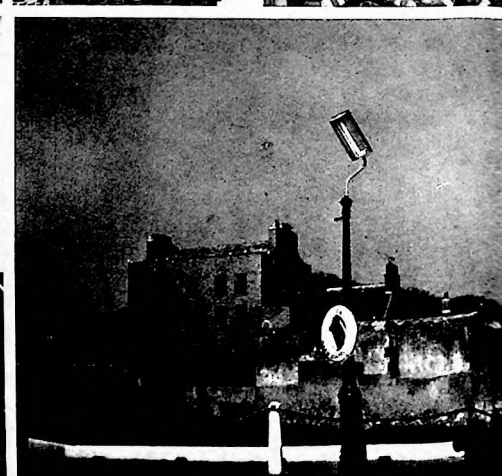
Light poles are interruptions, unwanted verticals of the worst sort: in villages or in open country continuous lighting is itself an interruption. It is not much use cleaning up the design if the pole remains in the view like a sore thumb. Hence the British crop of 'improved' concrete standards, C.O.I.D. approved or not, a, will still do incalculable harm. If the lamps will fit on buildings or walls, put them there, 1-3: even inept fittings like 3 do far less harm than the standards would. In 1, the wall fittings are well hidden, forced not by civic conscience but by economic pressure—there just isn't any **1, 2**





a

room in the street for lamp standards, which is as it should be in a metropolis. The City of London is a splendid example of not wasting land because there's a lot of **3, 4**

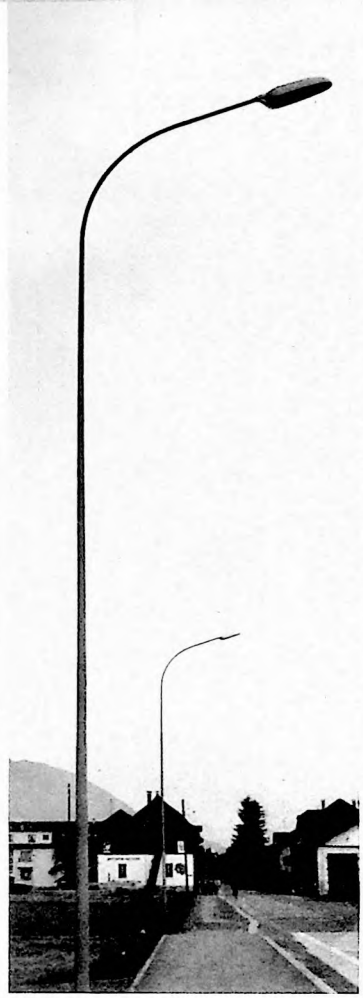


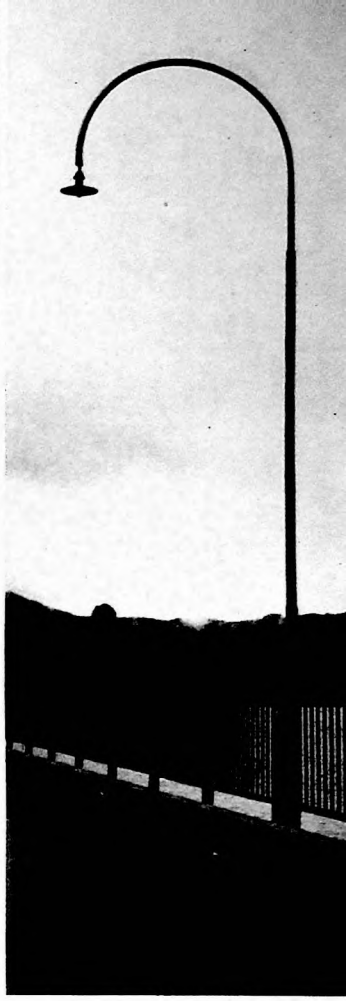
£ s. d. at stake; in fact all our land is precious—even if the only high valuation we are prepared to put on countryside is in terms of tourists' $'s. If there have to be lamp standards in a town, keep them crisp and small, 4, *or make them thin—*really *thin,* 5-7. *These three are near Zurich—there is hardly a bad lamp standard in Switzerland—*5 *and* 7 *are steel but* 6 *is concrete; and they are all about* 25 *ft. high. We suggest a short compulsory Swiss visit for all British lighting engineers as soon as possible. For the arcadian illusion small scale standards are a necessity—whether new,* 8, *or old,* 9. *If fluorescent fittings are essential the old standards can be converted to*

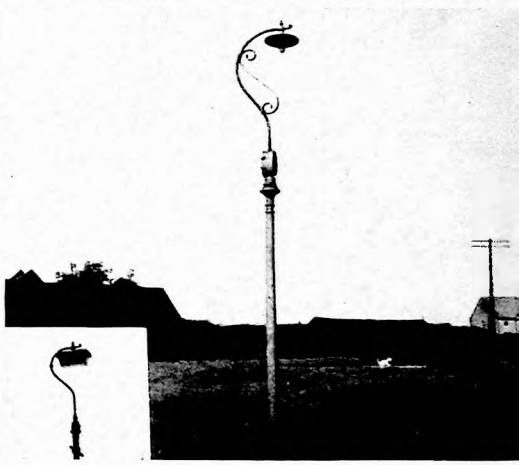
b

take them, 9 *inset, instead of putting up ghastly and costly replacements, b (for example* **5, 6, 7** *Marylebone's shocking beating-up of St. John's Wood with concrete truncheons). Village lighting needn't even be continuous: it can be indirect lighting or floodlighting of a few objects—typified by the indirect and most un-byelaw lighting at Turnhouse Airport,* 10. *The pattern, of lit window panes and home-made door lights,* 11, *will provide the rest. If you want the pleasures of living in a village, accept the village ways—for the sake of your rates, if no more worthy considerations will move you.*

key
1, *Lower Thames Street, London.* **8, 9**
2, *Launceston.*
3, *Haddington.*
4, *Castletown, IOM.*
5, *Zug.*
6, *Zürich.*
7, *Einsiedeln.*
8, *Harlow New Town.*
9, *St. Albans; inset, Barnet.*
10, *Turnhouse Airport.*
11, *Bradenstoke-cum-Clack, Wilts.*
a, Folkestone.
b, St. Helier estate, Morden.

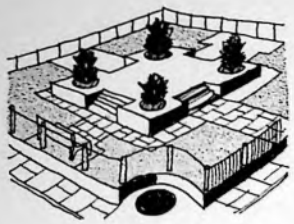






10, 11

parks



Caution: don't municipalize.

Metropolis	Oasis, sealed off from traffic, ***1-3;*** or lung, as big and as unrestricted as possible, ***4*** and ***5.*** Never pathetic fragments in the traffic stream, ***a,*** or Municipal Places of Enjoyment.
Town	
Arcadia	whole landscape should be a park, ***6*** and ***7.***
Country	greens and commons provide all the space needed, ***8;*** don't tamper with them, ***b.***
Wild	only in the sense of National Parks

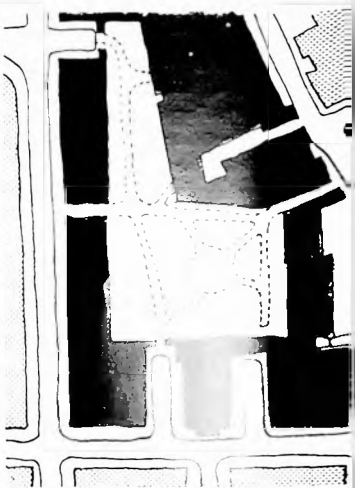
Public parks in towns must do a job, viz. provide relaxation, give the greatest possible contrast with the flurry around. Hence they should either be big enough to lose oneself in—a lung—or, if small, sufficiently sealed off from traffic to afford respite—an oasis. It is useless to put a few seats and some municipal gardening on an odd bit of ground next to a main road, a. All the flurry is still there, both directly through the traffic roaring by, and indirectly through the flurry of the misplaced suburban-garden landscaping. The lung must be unrestricted, as open as possible and as rural-seeming as possible, 4 ***1, 2, 3***

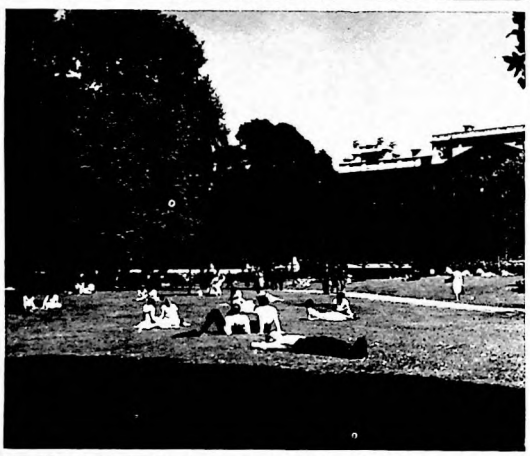
a

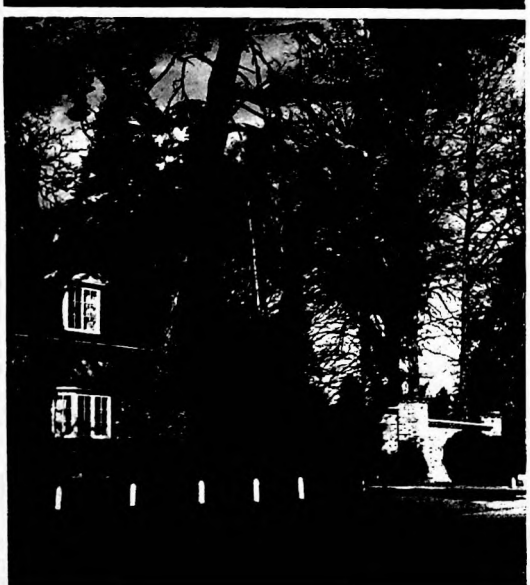
and 5. *The oasis must be hemmed in by buildings:* 1–3 *show St. George's Fields, an oasis in one of the most oppressive bits of* 1890*-brick Mayfair. From outside there are only four entrances, slits in a* ***4, 5*** *wall of buildings, arrowed in the photograph,* 1, *and on the plan,* 3. *Inside you are insulated from surrounding traffic,* 2, *in a small shady world of your own.*

In arcadia the whole landscape is a park, 6 *and* 7, *its ideal is a pine wood dotted with houses and seamed with a network of intricate footpaths. That is the illusion and everything should conform to it: roads, verges, filling stations, telephone boxes and car parks. They need not to be olde worlde, but they must be small scale and prepared to lose themselves in trees.*

The village park is the village green, and it doesn't need tarting up. Here is a green as it should ***6, 7***







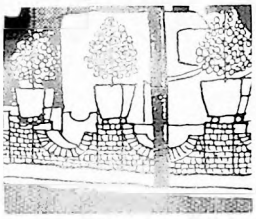
parks cont.

b

be, 8, not outstanding but shown because the rot has started in one corner of it, b, with suburban trim and flower beds.

key: 1-3, St. George's Fields, Mayfair. 4, St. James's Park. 5, Durdham Down, Bristol. 6, Cranbourn, Berks. 7, Sunningdale, Surrey. 8, and b, Woodburn Green, Bucks. a, Brewood, Staffs. **8**

ornamental planting



Caution: not like a suburban garden

Metropolis	Points of colour only, ***1,*** inflections, not interruptions; and not treated in a suburban way, ***a.***
Town	
Arcadia	The whole landscape is planted: park-like, ***2,*** or lush and jungly, ***3.***
Country	An individual affair: front gardens, ***4.***
Wild	Not at any price.

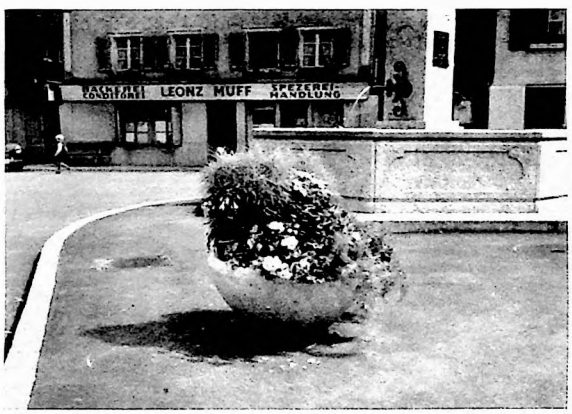
Planting in the ornamental sense, belongs to gardens, not to the landscape as a whole; it is private, not public. In arcadia, where the whole landscape is an extension of a garden, planting is not only welcome but obligatory: in 2, the planting turns the landscape into a

1, 2

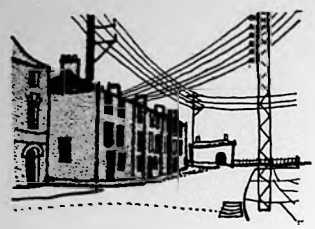
a

miniature park: in 3, its planting creates a 'suburban jungle' in the true sense of the phrase. One corresponds to the trim half-rural part of arcadia, the other to the closer-built and hence closer-landscaped suburban fairyland. In the country planting is a matter of individual choice: it should stay in the private front gardens from which it originally came, 4. In the towns it is only admissible if it reads in the street pattern as a point of colour, 1, not as a garden. The eye must be able to take in the planting without seeing it as an interruption; hence window boxes or tubs of flowers.

key: 1, Rothenburg, near Lucerne. 2, Blaise Hamlet. 3, Strandbad Tiefenbrunnen, Zürich. 4, Parracombe, Devon. a, Northwich. **3,4**



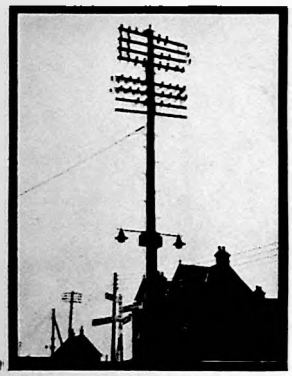
wire



Caution: not in the main street

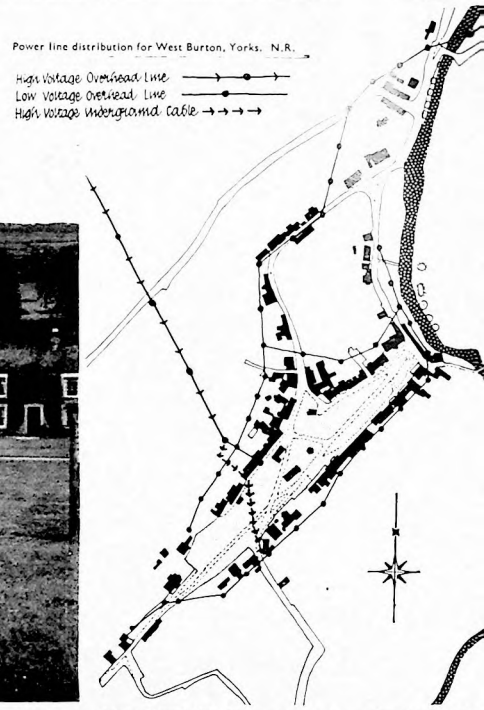
Metropolis	no problem: wire is underground anyway.
Town	if wire can't be put underground, run it around back lanes or even under the eaves, ***2.*** This leaves town centres free, ***1,*** and village greens unspoilt, ***3*** and ***4.*** In open country canalize wire along main roads, ***5,*** and then camouflage it behind trees, ***6.*** The result is the unity of the street regained, ***7;*** the alternative is disintegration of the street, ***a.***
Arcadia	
Country	
Wild	no wire.

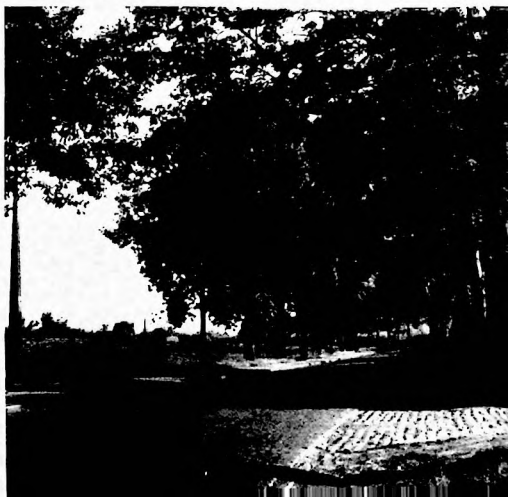
This is a page of expedients. The price of having Marlow High Street free from mess, 1, *is a tangle of wire in the back alleys. It is a fair compromise, if there isn't enough money to do the proper thing: what normally happens is no compromise at all,* a. *In the case of West Burton, in the North Riding, a careful scheme, shown on the plan,* 4, *was produced by a co-operative electricity board at the original prompting of the planning authority. Here the wire is carried around the back with the* ***1, 2*** *vital section at the neck of the green taken underground, leaving the*



central space, 3, *unimpaired. In* 2 *the electric cables run under the eaves of the terrace on the right—another example to prove that local* ***3, 4*** *authorities can co-operate if the electricity board isn't boneheaded* and (*a big qualification*) *if the planner has enough guts to take the first steps and persist until he gets some results.*

In open country there is a different sort of expedient, 5 *and* 6. *It is frankly second best to putting wires underground: equally it is far better than having them aimlessly straddling the countryside. The reason why telegraph poles are less obtrusive than most other interruptions is that they indicate a comprehensible line across the country—that of a main road—* ***5, 6***



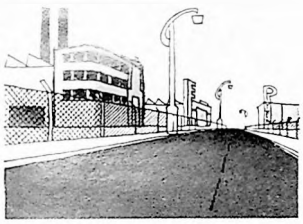


wire cont.

and a line which on the whole respects the contours. Any sort of wire canalized along a road in this way, 5, *does less damage than slashing across open country. In fact, most of the effect on the road-user can be removed by using roadside tree planting as the French do and then siting the poles and wires outside the line of the trees,* 6. *We have become so punch drunk with wire, poles, lamp standards and all the other vertical interruptions that it is worth showing the effect of just one street without them—at Ludlow,* 7, *where the wires have just recently been put underground. It shows clearly the regained enclosure—wall—floor—wall—which is the basis of any urban effect and which would be impossible with a twittering skyline.*

Key: 1, Marlow, Bucks. 2, Wells, Som. 3. and 4. West Ilsley, Yorks., N.R. 5, near Stapleford Tawney, Essex. 6, near Malines, Belgium. 7, Ludlow. **7**

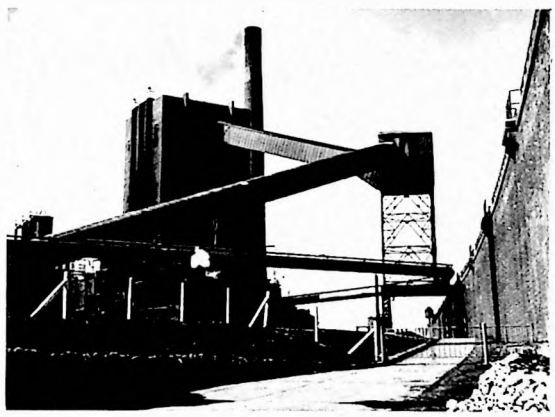
industry

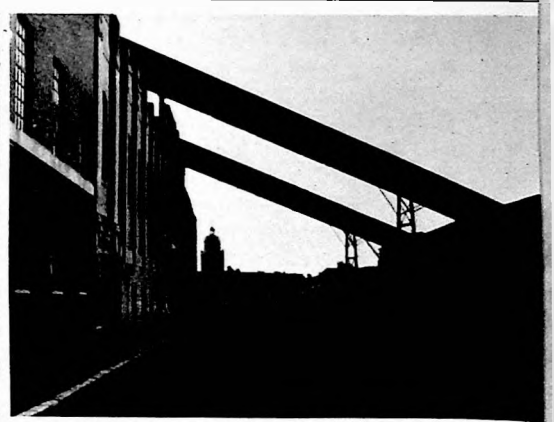


Caution: not isolated.

Metropolis	ground rents force it into the pattern.
Town	accept industrial forms, ***1.*** Work them into pattern of town if possible, ***2*** and ***3.***
Suburb	small clean factories can fit the pattern, ***4.*** Don't isolate them in an industrial desert, ***a,*** overleaf.
Country	agriculture is the country's industry and may look industrial, ***5-7*** overleaf. If big alien industry is inevitable it makes its own rules, ***9*** and ***10*** overleaf.
Wild	no industry.

Don't be afraid of industry; exploit it. Its forms may be the only exciting component of the landscape for miles, 1. *Wherever possible they should be worked into the urban pattern, not sealed off separately in zones. Zoning for zoning's sake—one of the mainstays of present-day planning practice—means quite literally evisceration to the average town: it takes away its guts. In a metropolis industry inevitably fits into the pattern: there's no room for an isolated 'industrial zone' in the City of* ***1, 2*** *London. In a town, big and small industry can be adapted to the pattern,* 2 *and* 3, *and one of the most useful techniques is the flyover like the coal chutes for Portsmouth Power Station,* 2: *the tower of Portsmouth Cathedral at the end of the street makes its point with more force, not less, for having such an uncompromising frame. If the industrial area is enormous or* ***3, 4***





[continued overleaf

Industry cont.

has unpleasant effects then keep it separate: but in fact most of our factories are now small and clean. The real industrial offenders are the huge plants whose fumes and smoke are carried for miles—like Thames-side cement works or I.C.I. at Billingham—and the real solution is suppression at the source. In arcadia small factories carefully dovetailed need not destroy the illusion, 4, *over-*

a

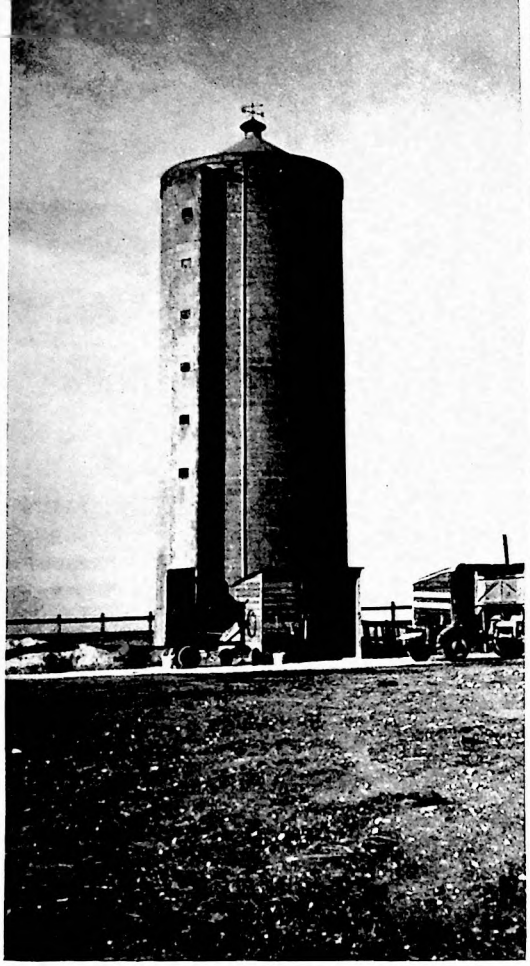
leaf. Put wire round the factory, or a concrete footpath and grass verges between factory and house, and the whole thing is burst open again: make a 'factory estate' and the same thing happens, a. *The country has its own legitimate industry—agriculture, and modern agriculture is mechanized, so express the mechanization frankly,* 5–7. *In fact agricultural buildings are among the few places where honest-to-god forms haven't been 'toned down': it is industry with its mess and its wire and its genteel office accommodation that needs to re-learn its own game from the farmers. Big industry in the countryside is bound to be an interruption if, like coal mines or cement works, it is inevitable, it must be accepted: what it does is to replace country by a separate category—the industrial area—with its own rules: that is replacing an uninterrupted pattern with a set of regular compact interruptions,* 9. *The basic rule is to make interruptions as clean and as positive as possible,* 8 *and* 10, *and as close-built as possible, with real countryside starting a few yards away from one factory and stretching right up to the next. Northern France can teach us a lot about this sort of pattern: in Britain we are swamping the country in between by sprawling housing and the misuse of derelict land.*

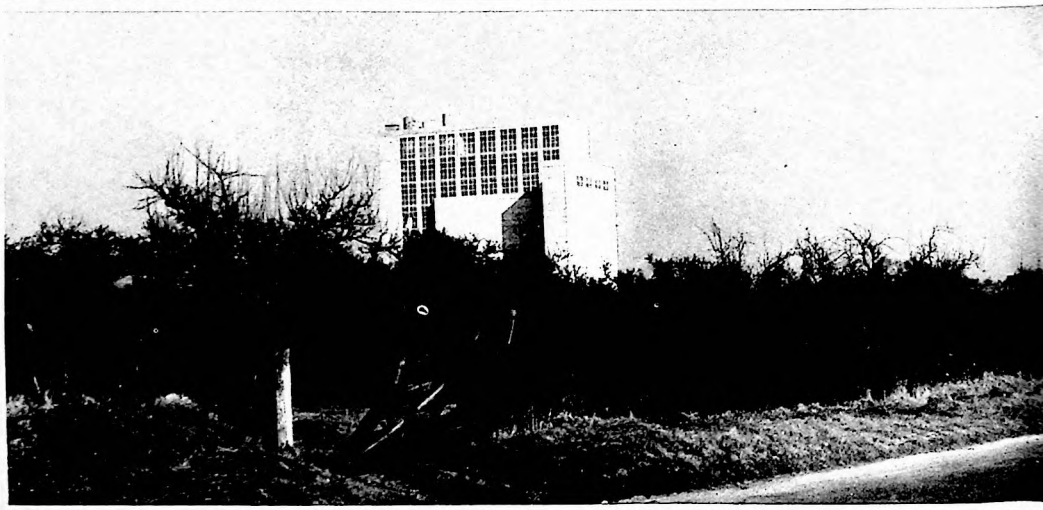
5 6 7

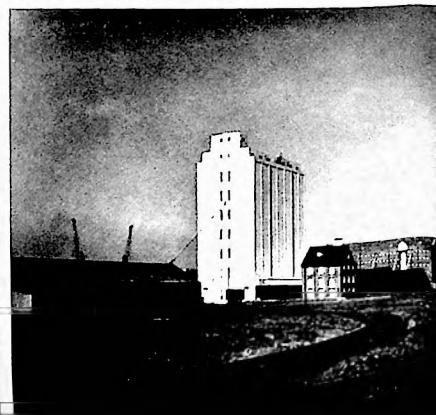
8

key: 1, *Margam steelworks.* 2, *Portsmouth.* 3, *Brigg, Lincs.* 4, *Woking, Surrey.* 5, *Compton, Berks.* 6, *Challock, Kent.* 7, *Wisborough Green, Surrey.* 8, *Haughley, Suffolk.* 9, *near Bourbourg, France.* 10, *Sharpness, Glouc.*

9 10







military installations

A countryside problem: integrate if you can, **4,** otherwise camouflage: Bicester Garrison as it is, **a** and as it ought to be, **1.** At least get rid of the clutter, **b,** and leave the big shapes free-standing in the landscape, **2.** Keep 'security' unobtrusive, **3.**

It is in the ordinary countryside that most of the installations are dumped, automatically representing a terrific urban impact (Bicester Garrison is the size of a New Town). This sort of thing can be integrated into the landscape—again, the Swiss show us how to do it, 4; the airstrip in the middle distance is quite clear, but by camouflaging all the ancillaries and letting the countryside pattern run right up to the runway it takes its place naturally. More often, the only answer is camouflage. Bicester Garrison should

1

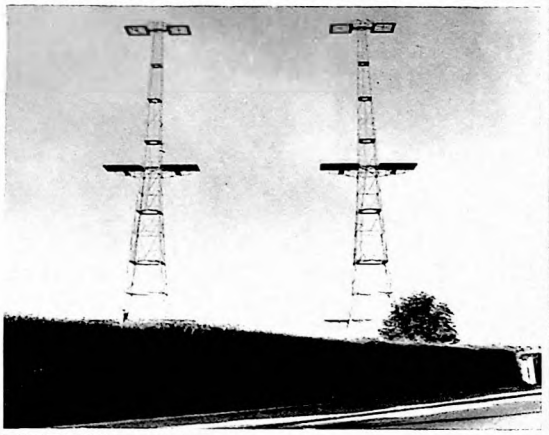
look like this, 1, *and not be the mess it is at the moment. The things that can't be camouflaged should be treated as if they were big industrial forms, by camouflaging all the clutter round the base—not leaving it as a mess exactly fitted by the word eyesore, b. The result could then be*

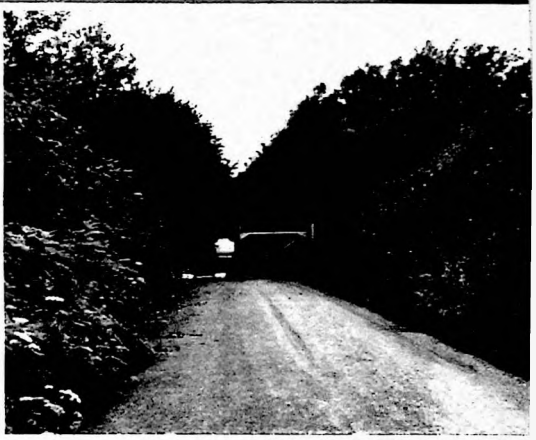
2, 3

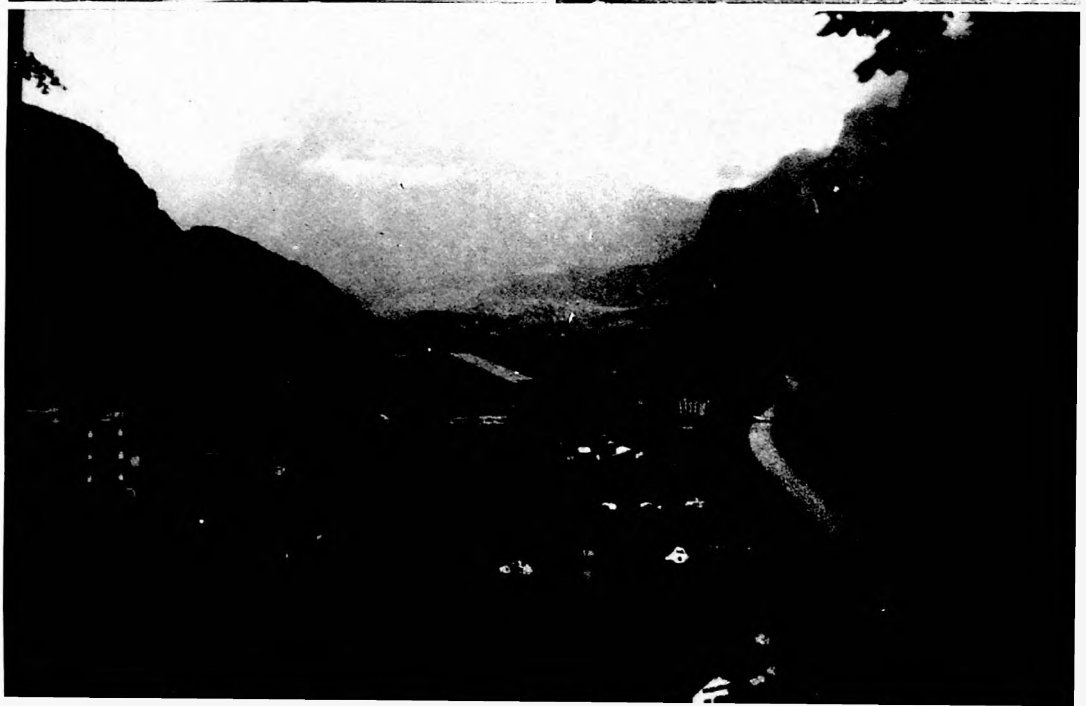
b

something like the masts at Dunkirk, 2. *Finally, security can be attained without the American triple wire fence and crow's-nest blockhouses. This could be the main entrance to an airfield,* 3*: it is, alas, only a blocked road at the back of one. Inside the screen of camouflage there can be enough wire and display to satisfy anyone's heart: outside, the countryside could still be read whole, looking the same as it was before except for an extra large wood. This doesn't happen at the moment: and unless the planning system is reformed* (see page 431) *it never will.*

key: 1 *and a, Bicester Garrison, Oxon.* 2, *Dunkirk, Kent.* 3, *West Malling, Kent.* 4, *near Näfels, Switzerland. b, Bulbarrow Hill, Dorset.*







4

the road: abstract signs

Simple abstract signs are anonymous - they have no visual overtones and fit anywhere: (country ***1-4,*** suburb, ***5,*** or town, ***6-8.***) And to any scale (distant view, ***3,*** or close up, ***2***)

It is not accident that all these examples are Continental. Our inability to think visually and our obsession with putting things down in words—making a statute book of the countryside—has eaten deeper into the Ministry of Transport than anywhere else in the Civil Service. Put an abstract sign into the view and the eye can read it both as a road sign and as an inflection on the pattern of the landscape. Think up a wordy equivalent and the chance of making a pattern has gone: the eye can't swallow it, it becomes an interruption, a literary intrusion into a visual world.

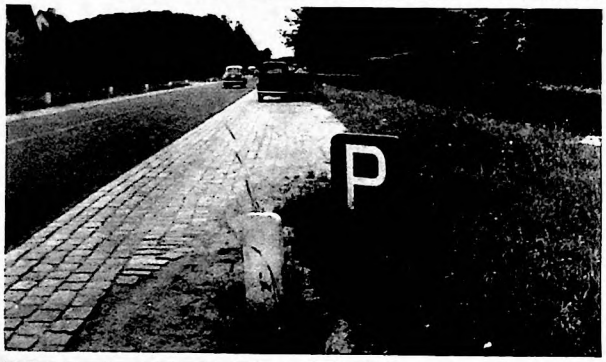
As might be expected, the abstract signs are also better road signs ***1, 2*** *because they can be clearer and less equivocal. 2 is more effective than a dozen boards screeching 'Warning, Single Carriageway Ahead': the eye can take in 6 in a fraction of the time needed to assimilate the equivalent message in words—that it is a one way street with parking permitted on the left hand side. 3 and 4 show that an abstract sign* ***3, 4*** *remains part of the landscape whether the onlooker is two hundred yards away or twenty. Meanwhile what do we get? This, a. . . .*

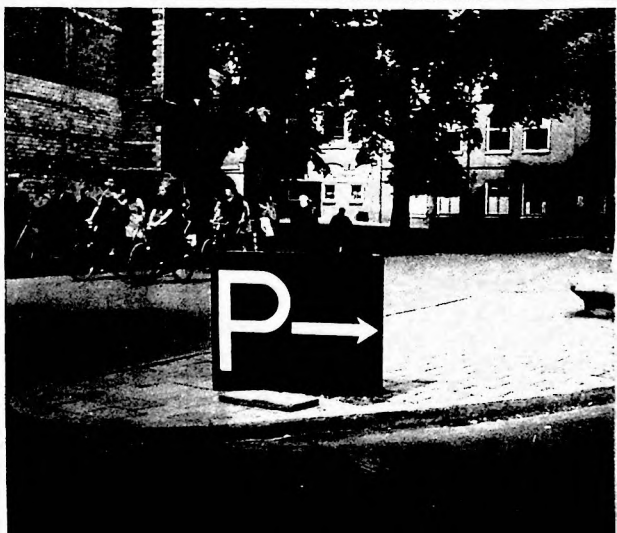
5, 6

a

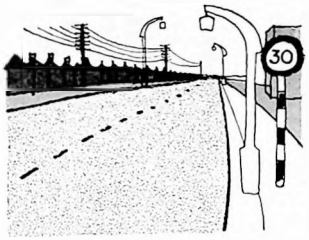
. . . awful to look at and hopelessly confusing for foreign drivers (Oxford Concise Dictionary: yield—produce or give or bring as fruit or result, repay cultivation, etc.). When will we stop trying to read our environment like a book?

Key: 1, near Zug, Switzerland. 2, on the Ostend-Brussels autoroute. 3, and 4, near Pontoise, Ile-de-France. 5, Hilversum. 6, Amsterdam. 7, Todi. 8, Alkmaar. a, Slough. ***7, 8***





the road: trunk road layout



Caution: not endless and arid.

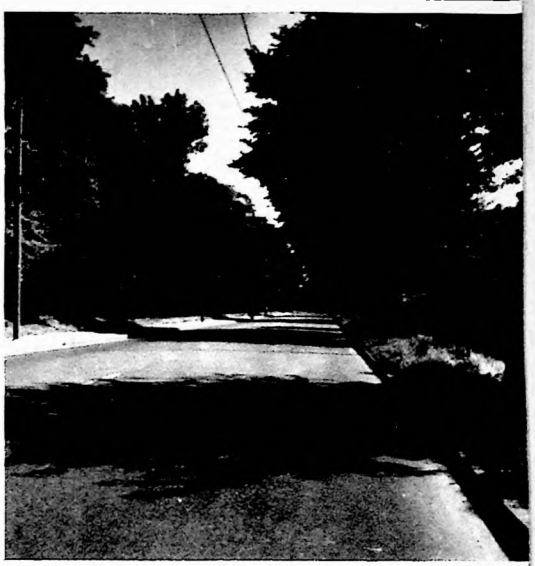
The trunk road has its own rules as a horizontal ribbon crossing all the categories. But it must be insulated from the surrounding landscape.

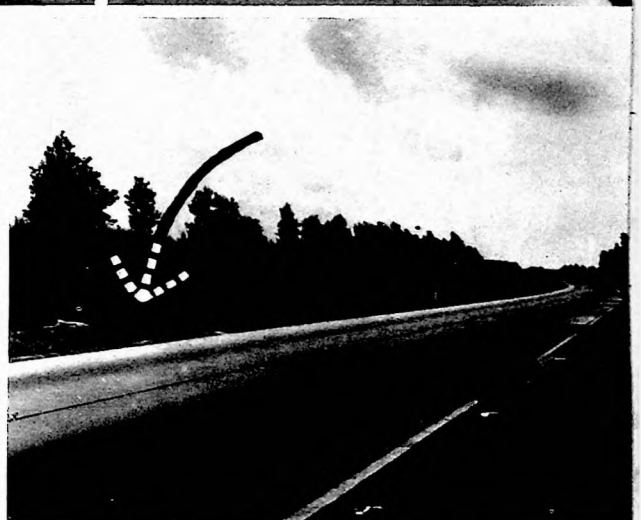
Metropolis	none: if you want to travel, expect to go slowly.
Town	internal by-pass, ***1,*** not ring-road.
Arcadia	tree-lined boulevard, ***2,***
Country	clean cut through the landscape: country, ***5;*** and wild, ***6.*** Minimize width by separating carriageways, ***3,*** or continuous central strip, ***4.***
Wild	

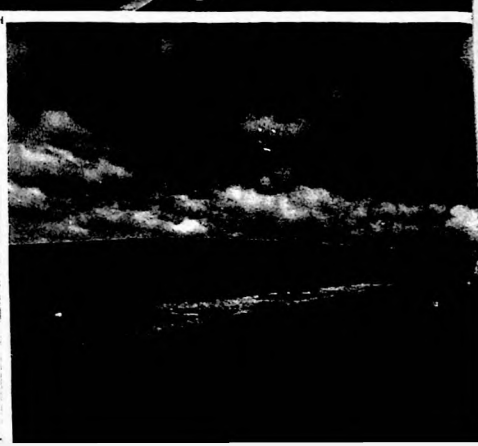
The trunk road must be fast, and if it is going to create its own rules it must do its utmost to respect the contours. It must be kept in bounds, which means that in the country and the wild it should make a frank railway-like cut across the landscape, 5 and 6; in arcadia complete insulation by camouflage is needed, 2—the inhabitants living on either side should be unaware that the trunk road is there at all. In the towns it mustn't thunder through the centre but should glance off near it, something brilliantly done in most Italian towns, 1 (and not be five miles away from the centre like the English ring-roads which encourage sprawl and create traffic problems of their own). ***1, 2***

When you are on the road, everything is seen from a frame of reference moving at 60 mph, breasting the landscape like a surf-rider. That effect is worth preserving for its own sake, and there is nothing which will defeat it more quickly than an enormous expanse of multiple carriageways and their verges. Camouflage the second carriageway and reduce the apparent width of the road to something that can be read as an extension of your wheels. At its simplest have a continuous central strip, 4, a sound Dutch job well done, unlike our botched and straggling shrubberies; a better solution is to split the carriageways altogether, 3 (the other carriageway is up the hillside as indicated by the dotted line). If there is a difference of level—it need only be 6 or 8 feet—the eye takes in the other strip as something quite separate. ***3, 4***

key: 1, San Gemini, near Toli. 2, Hampton Wick, Middlesex. 3, Dorking By-Pass, Surrey. 4, Rotterdam-Antwerp motorway near Dordrecht. 5, Cologne-Wuppertal autobahn west of Lennep. 6, Grimspound, Dartmoor. ***5, 6***







the road: trunk road detail

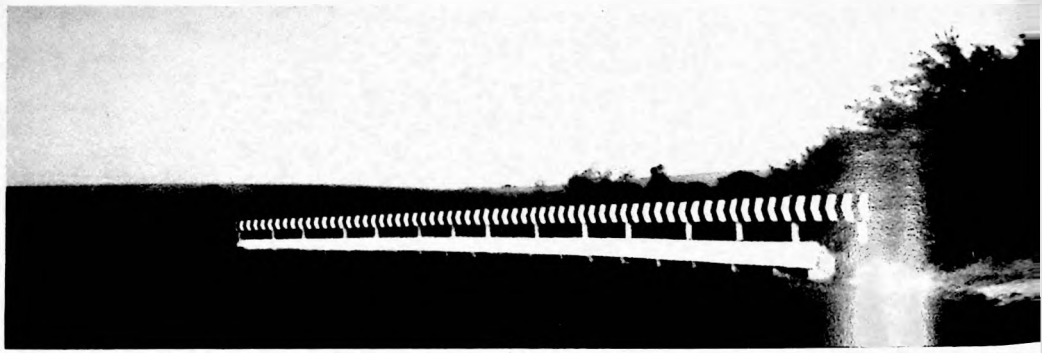
Caution: no small-scale beautifying.

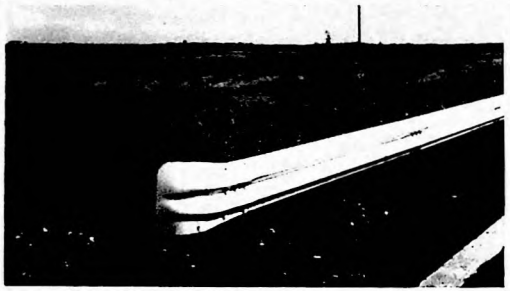
trim	horizontal and large-scale, ***1-3.***
structures	portable, ***4;*** or horizontal and part of the flow of the road, ***5.***
signs	big and legible, ***6*** and ***7;*** not confused with local roads, ***a.***

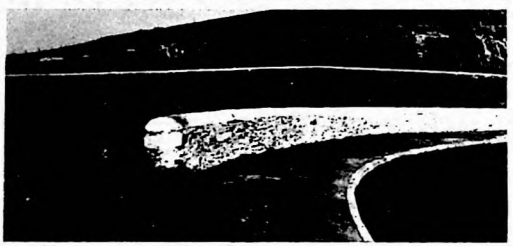
Everything to do with a trunk road must be big, legible, comprehensible at a glance and horizontal. These things combine to give an international language all of its own: 1 *is English; it could as well be in Italy or Sweden.* 2 *is simple sheet metal,* 3 *is whitewashed stone from the Isle of Man, whose Highway Board can knock spots off the Ministry of Transport. In each case the trim is flowing with the road and the driver.* ***1*** *Similarly, in* 5*, the driver feels that the lines of force of the road flow without a break through the autobahn filling station: there is no interruption. In* 4 *the snack bar is portable, like an extra vehicle drawn up at the roadside: again, no interruption. The lettering on autobahnen,* 6 *and* 7*, lacks punch but it has the primary value of legibility and, in* 6*, of respecting the lines of flow; the long horizontal sign gives you a psychological push off the road. Contrast these with the usual fatal British compromise of having reasonable trunk road trim and then making nonsense of it by duplicating everything with a local-road signpost, a.*

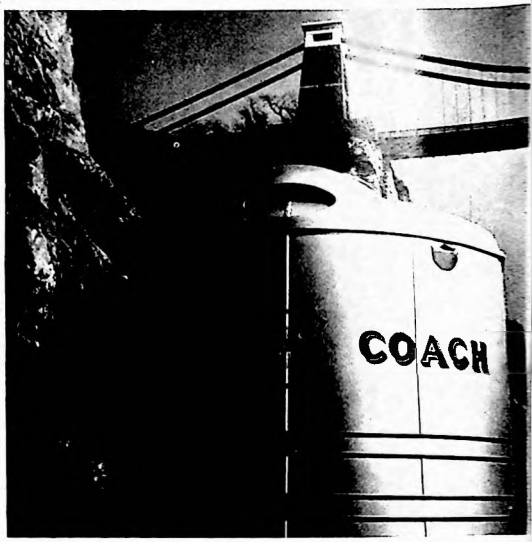
2 / ***3*** ***4***

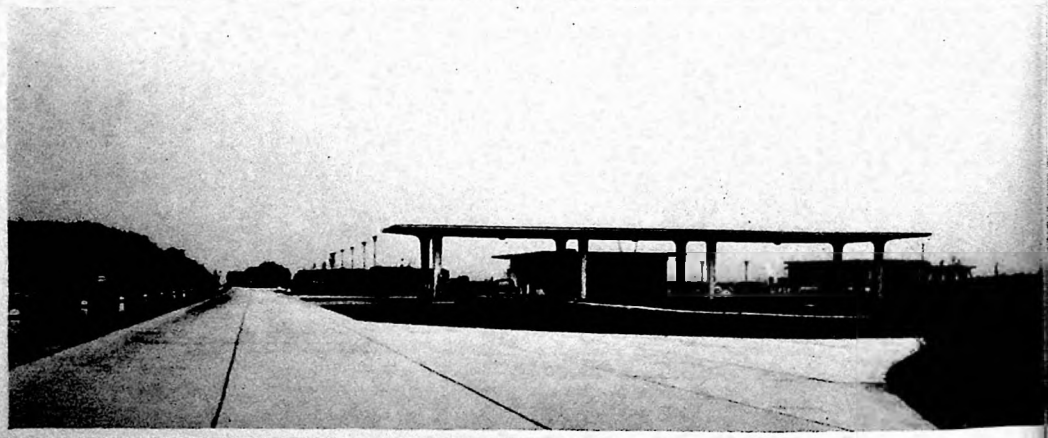
5











the road: car parks

Caution: not a desert of asphalt.

metropolis	underground or multi-storey.
town	pocket handkerchief - done neatly ***a;*** camouflage by trees, ***2;*** or con (seaside), ***3.***
arcadia	keep cars out of the pattern b siting, ***4.***
country	lost among trees, ***5,*** or honest r
wild	no car parks: park where you can

To get parked cars into the landscape pattern there are two things that the planner can do: contain them behind a rigid boundary (provided the boundary itself isn't an interruption), or camouflage them. 1, 3 *and* 6 *show containment:* 2 *and* 5 *show*

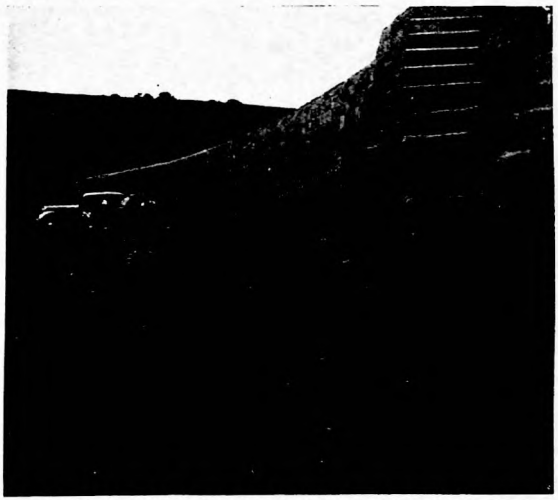
a

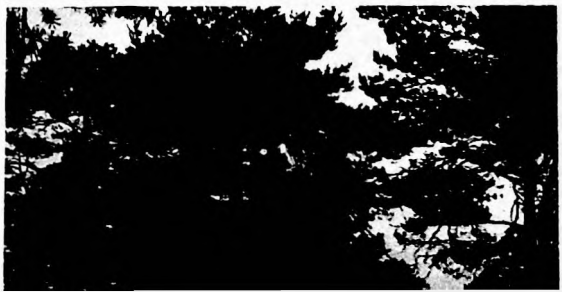
camouflage. 4, *shows both,* a, *shows neither. Containment needs firm boundaries which are themselves part of the pattern: hence the setts and rail in* 1, *the seawall in* 3, *the sunken car park —temporary, alas—in* 4, *the firm brick strip and the white studs in the Dutch motorway,* 6. *The botch-up in this column,* a, *isn't containment it is just expedient car-dumping on a bit of slum clearance. Camouflage means losing the cars among trees—either in an urban way,* 2, *or a rural way,* 5. *The urban solution needs a revolutionary change of heart—from regarding cars as an unavoidable evil to be housed on a vacant lot to realising that every car park is a potential town square, as long as the cars don't dominate.*

1, 2

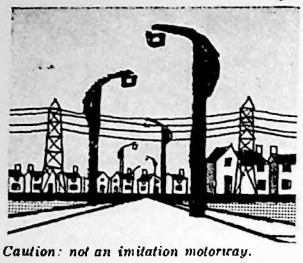
3, 4

In the wild the camouflage and permanent trim needed for a car park would be more of an interruption than the cars themselves. Park where you can, and don't expect smooth going: bogged wheels and broken springs are fair comment on nature's part.





the road: local road layout



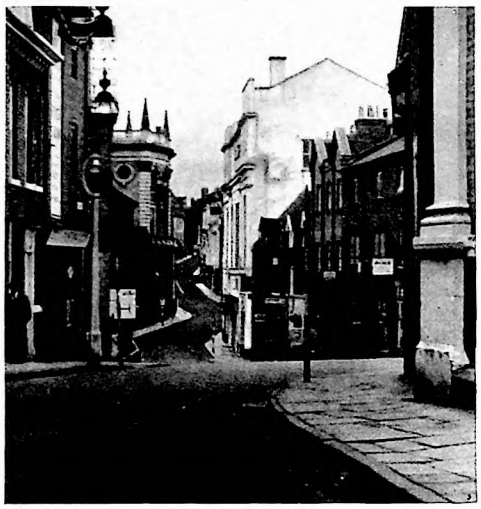
Caution: not an imitation motorway.

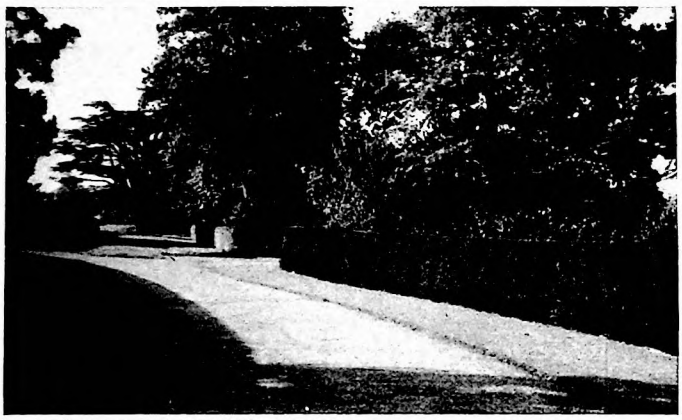
Metropolis	roads should fit the town, **1** and **2,** not vice versa.
Town	
Arcadia	winding and complex, **3.**
Country	narrow, respecting the natural pattern, **4;** never piecemeal widening to be a cut-rate arterial road, **a**
Wild	rough tracks, **5.**

A good system of trunk roads will ensure that the long journeys can be made quickly: the rest of the road system should be left alone. The fundamental crime is to try to make every lane into a cut-rate arterial road, a. In towns the occasional traffic block is a justifiable price for keeping the town intact by designing imaginatively to give both sight lines and enclosure, 1, or by keeping the old pattern in modern dress, 2. Municipalization is fatal to arcadia: local roads should look like country lanes spruced up, with trim hedges instead of fencing, and mown grass for a pavement, 3. Country lanes should remain as country lanes: even to the extent of giving way to **1, 2**

a

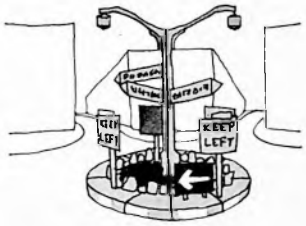
nature literally, 4—the effect is just like that of an unspoilt historic monument: neither demolished nor railed around, but accepted into the pattern. The pattern in the case of the wild is that of unfenced barely surfaced tracks; adequate for farm traffic and no more, 5. You go at your own risk. The wild subdued with asphalt and kerbs ceases to be wild: it might as well be a public park in Streatham. The Continent has fast trunk roads and unimproved local roads—both are fun to drive on: we muddle along confusing the two and our road conditions get worse every year. **3, 4**





key: 1, Shrewsbury. 2, Mellingen, near Baden, Switzerland. 3, Camilla Lacey, Surrey. 4, Box Hill, Surrey. 5, hill road from Rillin to Bridge of Balgie at Lochan na Lairige. a, Long Sutton.

the road: local road detail

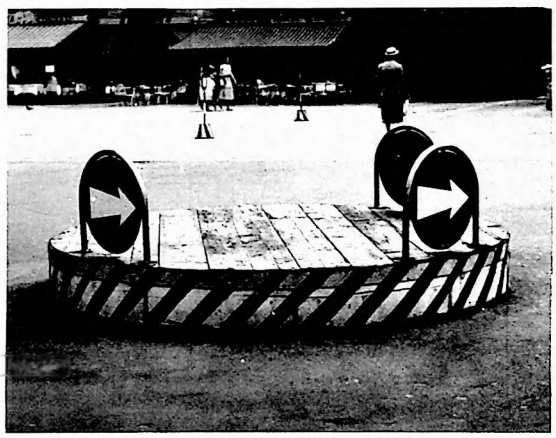


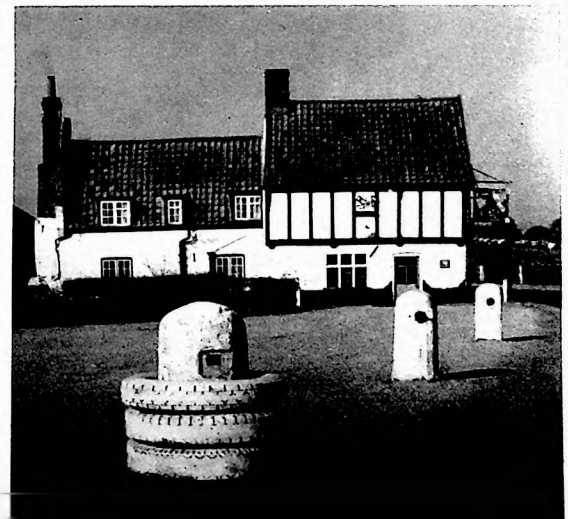
Caution: not municipal rustic

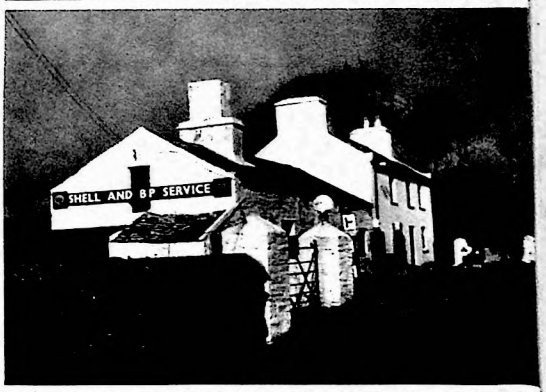
Metropolis	filling stations worked into the pattern, ***1;*** portable street furniture, ***2;*** the road surface as a signpost, ***3.***
Town	
Arcadia	extreme care in maintaining the illusion, ***4,*** a T.T. grandstand.
Country	respect for rural pattern, ***5,*** and genuinely rural trim, ***6.***
Wild	only to indicate the boundary of the wild, ***7.***

This is an anthology of separate points to show that road trim can express local character like any other set of objects. The filling stations, 1 and 5, could have produced two gashes in the landscape: instead 1 maintains the terraced street line of the town, and 5 with careful siting of pumps and unifying whitewash fits into the country view. In both cases the standard lettering enhances the result once the basic unity is preserved. All you need for a town roundabout is a portable police stand, 2—not a huge affair of stonework and shrubs and ninety-five signs, but something which can be moved around to suit the traffic flow, which is ideal for controlling traffic, and which must have cost about five pounds to produce. 3 shows a complex web of different uses (main road, minor road, car park, pavement) indicated perfectly clearly without any interruption in the flow or any signpost. 4, which looks like a setting for the performance of an idyll, is one of the main T.T. grandstands in the Isle of Man. In the town it would jar, in the country it would appear too coy, but where it is, on the edge of Douglas, it is just right. One last reminder, 6, that the country is rough, not smooth: what is more fitting as an emergency buffer for over-enthusiastic motorists than motor tyres? This in its simplest form is the act of imagination we seek so hard and find so rarely among local government officials. Finally, there should be as little road trim in the wild as possible, but a cattle grid can be very effective in indicating the boundary between upland and wild, 7; beyond this, there is unrestricted open space, you are out on your own, free of human interruptions—if you're lucky.

key: 1, South of France. 2, Wigton, Cumberland. 3, Como. 4, Kirkbraddan, I.O.M. 5, Thurton, Norfolk. 6, near Santon, I.O.M. 7, moors above Kirkmichael, I.O.M. **6, 7**







1, 2

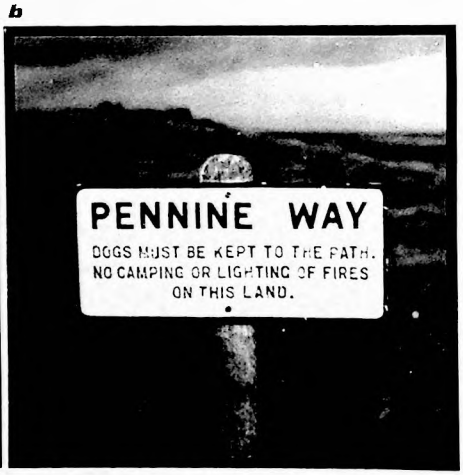
3, 4

***visual thinking vs. literary thinking**: the whole of this case-book would be unnecessary if people planned with their eyes and not their fountain-pens: visual thinking for visual problems. Some Britons still do—in the Isle of Man, for instance. The designer of the famous Laxey Great Wheel, 1 and 2, dovetailed huge and up-to-date machinery into a wooded glen in the 1850's without ever worrying about siting or zoning in the abstract: he just used his eyes. So did the retired joiner who repainted it so splendidly in black and white a few years ago at his own expense. The trim used by the Isle of Man Harbour Board, 3 and 4, which looks so timeless, is in fact constantly being renewed and altered: much of it is post-war. Switzerland has regained the habit of visual thinking by conscious effort and education: but Great Britain will never get better while the civil service and local government officials treat the landscape as a legal document, typified by the three stupidities shown below. The first and second are self-evidently absurd, a and b; the third, c, represents the sinister wish to 'Mark the U.D.C. boundary'—by a dowdy sign—way out in the countryside.*

Unless the whole tribe of Ministry spokesmen, local officials, Council members and board executives get out into the open air, in sunshine or rain, and then open their eyes and realize what their decisions are actually doing to the landscape, things won't get much better—whether the results are minor lunacies like these three notices, or major lunacies like most housing estates. Subtopia isn't the will of the people: it is largely the result of allowing the vast majority of our public servants to go through life with their eyes shut.

a

b



c

a vote of thanks

Whilst compiling the casebook we came upon a lot of examples of positive planning and of outrages successfully combated which were impossible to photograph. We have included a selection here and would like to thank the public and private bodies concerned, notably the Council for the Preservation of Rural England, for succeeding against the worst of odds. If the government wants to safeguard the appearance of the country it governs—or even if it wants more tourist dollars—it could do worse than subsidize and publicize these devoted efforts. Respect for the landscape will rarely stop an intended bit of vandalism whether public or private: a bit of money and some public ridicule might.

planning authorities

First and foremost we want to thank the Isle of Man for being a model of humane planning that gets results. Man has fifty thousand people, and what is effectively a complete administration of its own—consequently everything is done with a minimum of formality, bureaucratic organization and amour-propre. The details of planning applications are similarly kept to a minimum and replaced by informal discussion as far as possible. The result—thanks largely to the personal efforts of the planning officer and his staff and aided by an extraordinarily good Highways Board—is that Man is probably the best planned county in Great Britain.

Secondly, the North Riding of Yorkshire for its all-round work in getting government departments, the GPO, and the forestry commission to compromise and co-operate when making their proposals. One result is shown on page 396 in the grid supply for West Burton; similar compromises are being repeated all over the county, which is the perfect example of making inadequate powers go a long way.

We would also like to thank:

Lancashire County Council for doing its best to keep up a green belt in S.W. Lancs whilst having to work with fifteen county boroughs who have quite separate planning powers: for starting on a planned programme of land reclamation, and for co-operating wholeheartedly with the local preservation society—the Lancs branch of the CPRE actually has its headquarters in the County Offices at Preston.

Cambridgeshire County Council for removing almost all advertisement hoardings in open country and from unsuitable sites in Cambridge itself.

The Peak Park Planning Board for its skilful handling of a difficult administrative job—a separate planning organization superimposed on three counties—and for the care it takes over materials and siting of new houses and farm buildings in open country.

The Lakes Planning Board for its dogged and largely successful fight with the local electricity authority against the threat of big pylons in Lakeland—a landscape to which they would do irreparable harm. Their motives have been consistently misrepresented to serve the tortuous ends of local politics: a process which reflects even less credit than usual on our system of local government.

The County Surveyors of Wilts and Shropshire for understanding the nature of main road trim, something which it seems that the Ministry of Transport has yet to grasp.

Durham County Council for using 'design control' to improve and not inhibit design. After three years' hard work by the planners on private builders, most house designs have reached a stage at which they could infill a Durham village without disrupting it. This is no small achievement, looking at the standard around London, and it shows how this much-maligned control could work if applied intelligently and enthusiastically. The Council have also produced a comprehensive scheme for Green Belts in Durham (accompanied by vociferous abuse from Darlington, West Hartlepool, etc.) which is now under consideration. We hope the Ministry won't whittle the proposals down until they become useless.

Essex County Council for keeping its share of the green belt truly green (apart from wholesale incursions by the LCC). By some miracle the country between Abridge and Ongar remained really rural—not even nibbled at—until the end of the war: and the strict control on building there seems to promise that it will stay that way. (But the Green Belt here, as in every other county, is badly leap-frogged.)

Deal Town Council who, far from pouring scorn on the idea of their having any outrages, instructed the borough surveyor to compile a list of them, as a result of which Walmer station has been tidied up, advertisement hoardings have been controlled and other messes are on the way to being cleared up.

preservation: societies and private individuals

Our first thanks go to the Council for the Preservation of Rural England which is the main body which combats outrages in the countryside. It is handicapped by being run on a tiny income, without an official grant (perhaps the lack of subsidy is not surprising, as government departments themselves do so much of the damage). It is also largely dependent on the vitality of its local branches if only to report outrages before it is too late. Where the branches are active—like those in Lancashire and the Peak District—remarkable work can be done.

Here are some of the most striking cases won by the CPRE since the war.

1. *Burbage Training Area, Derbyshire*, 1947
Burbage is a beautiful, wild, upland gritstone valley flanked by cliffs. This area is a popular playground for Sheffield and provides an exciting though not very extensive walk suitable for middle-aged persons who use it intensively. The Army were in possession of this valley at the end of the War and in 1947 proposed to retain it as a training area. The CPRE were successful in persuading the local command to abandon their proposals, to clear the area and open it once more to the public.

2. *Letcombe Bassett, Berkshire*, 1949-50
This village had been in effect condemned to decay chiefly owing to the difficulty of providing drainage, and this became a test case in respect of the prospects of survival of a small remote village. After a Public Inquiry, the Wantage RDC decided to provide drainage for their own cottages and proposed to consider reconditioning some of the old cottages. It is hoped that this small village has now been reprieved and that other similar villages may reap the benefit of this case.

3. *Hardcastle Crags, Yorkshire*, 1949-50
The CPRE in conjunction with the Hardcastle Crags Preservation Committee was successful in defeating a clause in the Halifax Corporation Bill authorizing construction of the Hebden Reservoir, under which this famous valley would have been inundated and the existing landscape entirely destroyed.

4. *Barnet Lane, Boreham Wood, Hertfordshire*, 1953 *and* 1954
Combined efforts by the CPRE, the Hertfordshire Society and local interests were successful in saving from development the northern frontage of Barnet Lane: a vital part of the London Green Belt.

5. *Power Station, Plas Machen, Monmouthshire*, 1953
As a result of opposition to a proposal for a power station at Plas Machen, in the only part of the Rhymney Valley which is not already industrialized, in which CPR Wales participated, this proposal was abandoned.

6. *Hartslock Woods, Oxon*, 1954
The CPRE protested against the proposed clear-felling of these famous woods and, after prolonged negotiations, an acceptable scheme of replanting has been adopted.

7. *WD Buildings on Dartmoor*, 1955
In 1955 a War Department proposal to erect a large number of unsightly buildings for emergency use on an exposed site adjoining the northern boundary of the Dartmoor National Park, which the planning authority originally accepted without objection, was abandoned owing to the sustained opposition of the CPRE and its local affiliated body, the Dartmoor Preservation Association.

8. *Lamorna Valley, Cornwall*, 1955
The CPRE and its Cornwall Branch successfully opposed a proposal to erect over 100 houses, together with a petrol station and a six-acre caravan site in this famous Cornish valley.

9. *North Wales Hydro-Electricity Schemes*, 1955
Important concessions in respect of these schemes were obtained by the CPRW in conjunction with other bodies. In the Ffestiniog Scheme, a tunnel is to be provided instead of six 7-ft. pipes for a length of 600 yards. In the Rheidol scheme, a tunnel will be provided instead of pipeline for 220 yards down the hill Dinas, and the flow down the Rheidol gorge will be restricted considerably less than as originally proposed.

We also want to thank:

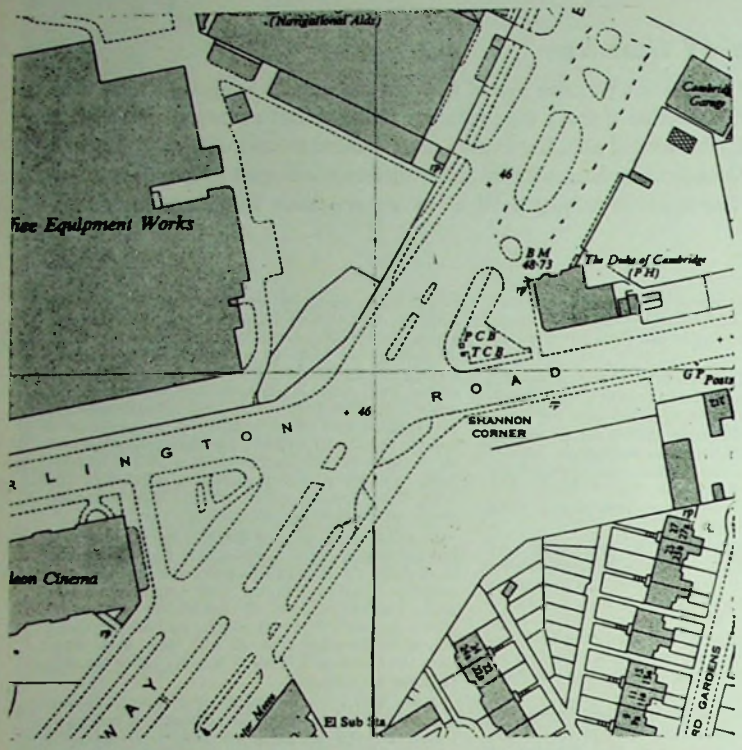
The Kensington Society who as a result of persistent agitation in the past are now consulted before street furniture is altered in Kensington and whose wishes are usually respected. And to the Chelsea Society for doing similar work there: both societies show how much can be done inside a town or locality with enthusiasm, persistence and refusal to be put off with eyewash. The work of the Central Council of Civic Societies, the urban equivalent of the CPRE, ought to receive much more publicity.

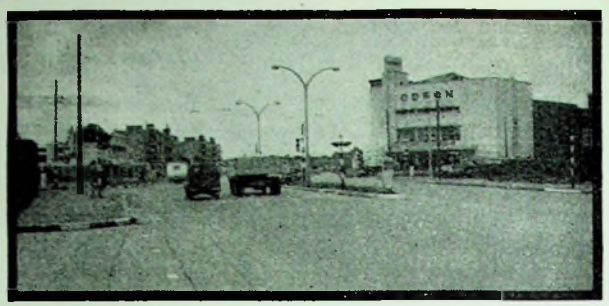
Mrs. Paul Reilly for preventing the replacement of the unobtrusive and elegant street lighting in her Chelsea street by the simplest possible means—going out and protesting to the men who came with the replacements (the 'question-mark' pattern, not the 'politely-sick' pattern). The men took them away again and they haven't been seen since. And to Arnold Machin, ARA, for gallant and, alas, unsuccessful attempt to resist removal of the old light fittings on his Victorian estate at Stoke-on-Trent by chaining himself to one of them. How many more cases could have been prevented—or, at least, reconsidered—by similar action? Once the public has shown that it is not on the voters list just to be sat on, half the battle is won. At the moment, as far as local government is concerned, it is living in something more like a two-party tug-of-war dictatorship than a democracy.

David Verey and the other part-owners of Barnsley for making a splendid village out of an ordinary one simply by taking extreme care over the details (see page 380).

The Rottingdean Preservation Society, trapped inside the County Borough of Brighton, for its twenty-year struggle against steamroller sprawl. It has, after repeated fighting and against repeated breaches of good faith, wrung some concessions about building on the downs from the Corporation: the whole sorry story will be given in detail in a future issue of the ARCHITECTURAL REVIEW.

The St. John's Wood Preservation Society for its resistance to the barbarous and pointless replacement by Marylebone Council of old small-scale lighting in St. John's Wood side streets by squat concrete columns. The uproar caused a surprised council to think again, and has at least won the concession that the society and the RFAC will be consulted before extension to side-street lighting takes place.





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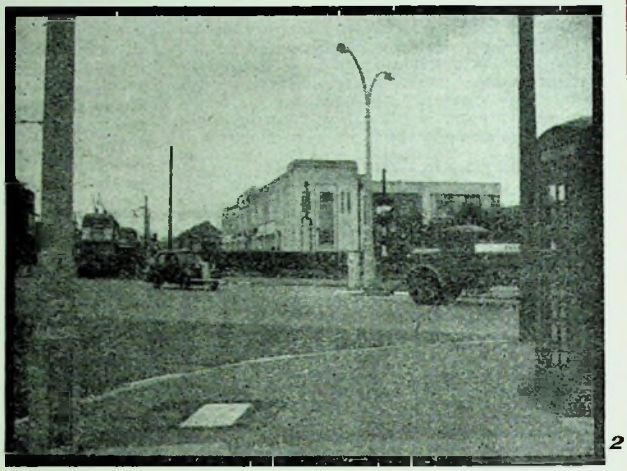
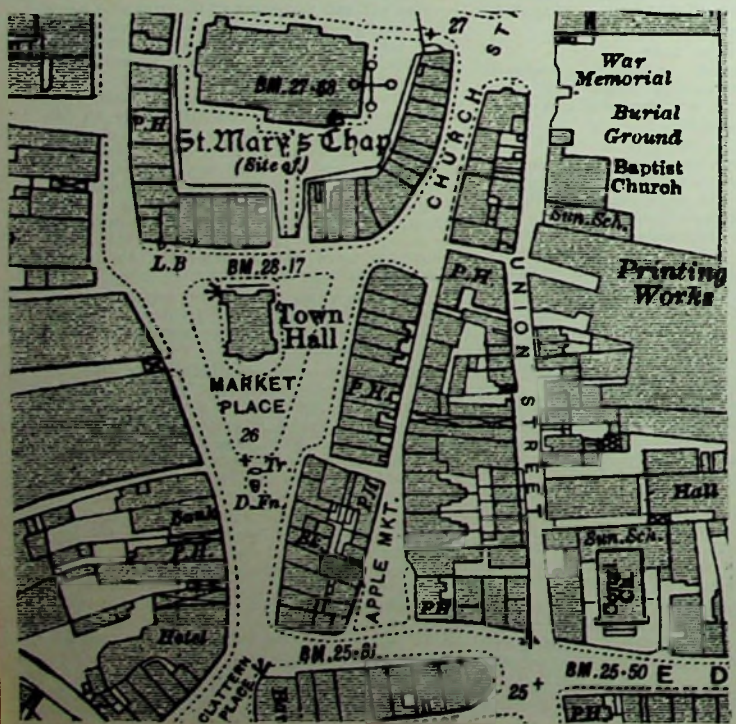
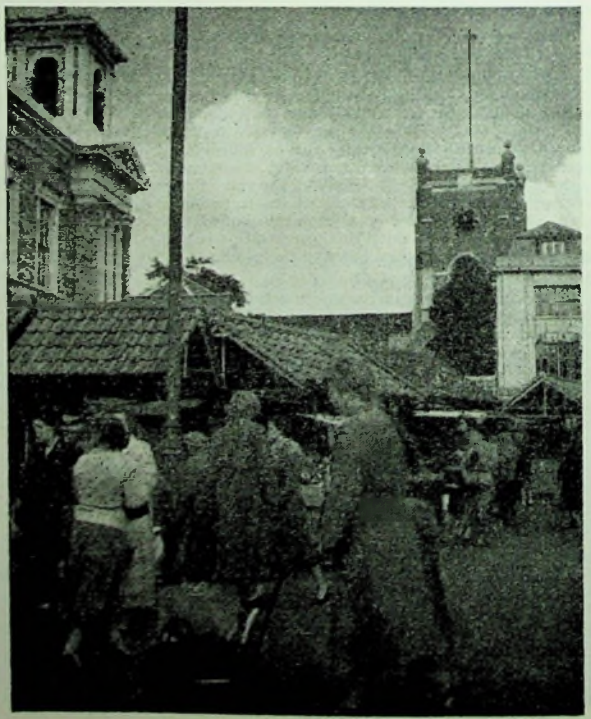

2

Same area (approx. nine acres)

Above is one intersection on the Kingston by-pass, showing the appalling waste of land—at the corners, in vacant sites, in the verges, in front of garage and cinema. The result, inevitably, is that it looks like a desert, 1 and 2. Below and occupying the same area (both maps are to the same scale) is almost all of the centre of Kingston-on-Thames: church, town hall, two market places and most of the shops. The first is inevitably anonymous subtopia, the second inevitably a recognizable place—one of the best town centres in the home counties, 3.

This is the real answer to urban sprawl—careful and compact planning, making use of the principle of economy. In theory it sounds easy to plan tightly: in practice there are dozens of obstacles, beginning with theories of overcrowding held by 'informed opinion' that have never been tested on the site, ending with such mundane things as the way in which gas and electricity mains are laid under the footpath. If misguided ideas are fixed in the byelaws and then applied rigidly and without intelligence, the best schemes are doomed to end up looking as the New Towns have. The only answer is a point-by-point overhaul of byelaws and the byelaw spirit: and this is carried out by Walter Manthorpe in the article opposite.




3

Walter Manthorpe

THE MACHINERY OF SPRAWL

The gross inefficiency of the mechanics of living is gradually penetrating into the national mind and there is a widespread call for a land policy which can meet the demands imposed by our particular social organization. Above all, the full exploitation of our limited and inadequate land surface needs considerably greater study, for in this exercise lies not only the answer to the question of efficient organization but also that to the problem of the spiritual needs of man in so far as they can be satisfied by an ordered and truly pleasurable environment. But creative experiment is, in most parts of the country, effectively barred to any architect who wishes to demonstrate the qualities of efficiency, compactness, and urbanity in that fundamental unit, the ordinary residential area. Rules of thumb, planning controls, byelaws and general prejudice have now so combined that it is practically impossible to build towns; only garden suburbs are permitted. The object of this article is, therefore, to identify as many as possible of these hedging rules, which frequently impose a predestined form on development long before the architect has the opportunity even to consider his design, and to re-examine their validity in the light of what we see happening to the land of Britain. The first, and most important, barrier to reform is:

1 'informed opinion'

The Final Report of the New Towns Committee of July, 1946, well exemplifies the kind of authoritative opinion which inhibits new thought upon the inadequacies of the residential areas built between the wars and it demands prior attention because it was the manual upon which brave endeavours to build New Towns have been based. It is a learned and valuable document, but it must be judged by the towns it has produced. In some cases it is perhaps too early to see the final result but in others there can be no hesitation in coming to dismal conclusions, which are largely a direct consequence of the following planning principles which the Committee enunciated:

a. Density

'General Urban Zones'—'The net residential density taken . . . is 80 persons per acre; but if the aim of a balanced population is attained and there is a due proportion of larger houses on larger sites the average residential density is not likely to exceed 25.'

'Area for Towns '—'Assuming an overall density in the built-up area, including recreational parks, of roughly twelve persons an acre, the approximate areas of land to be purchased for towns of different population should be:

Intended Population.	*Built-up Area; Acres.*
20,000	1,650
30,000	2,500
40,000	3,800
50,000	4,200
60,000	5,000

comment Before looking at the value of the suggested figures it is essential to reflect upon the significance which is frequently attached to the terms 'high density' or 'low density' even in informed minds. The following propositions will help to clarify the position:

1. High density does not necessarily imply poor living conditions.

Luxury flats:	*Net density:*
The White House, Regents Park	511 persons per acre.
Dolphin Square	316 „ „ „
Dorset House over	300 „ „ „
Much of Mayfair	200 „ „ „

If the domestic architecture is not entirely acceptable, here are some of the nation's cherished Buildings of Architectural and Historic Merit:

Brompton Square—
early nineteenth century town houses of considerable charm
About 100 persons per acre.

South Terrace—
three- and four-storey houses typical of the best in traditional British planning
88 persons per acre.

Pembroke Square
—three-storey terrace of circa 1880
About 90 persons per acre.

Edwardes Square
—mostly three-storey houses with small gardens of circa 1819
Between 59 and 109 persons per acre.

Pelham Place and Crescent—Basevi's composition of circa 1825
About 70 persons per acre.

1

2

1, Pelham Crescent (70 p.p.a.) and 2, Brompton Square (100 p.p.a.): two of the most sought-after sites in London. Obviously they do not provide sub-standard living conditions: the density is achieved by a careful use of space and willingness to make a town more than a collection of unrelated boxes.

These are examples of impeccable architecture carried out over 100 years ago, when there was no land shortage, with the

require to be uncovered after they have been laid, objections to the laying of the sewers under carriageways because of interference caused by repair works need only be considered in relation to the more important highways.'

Harlow is an example of a new town where the views of the New Towns Committee have been adopted. In the REVIEW for May, 1955, Mr. Frederick Gibberd complained of the effect on townscape of placing services in 9 ft. verges on either side of the carriageway, of laying sewers outside the carriageway for reasons of accessibility and of allowing house drains still further to widen the land that is sterilized to building. His diagram showed that, in a typical case, houses would be prevented from approaching nearer than 21 ft. to the kerb, 5.

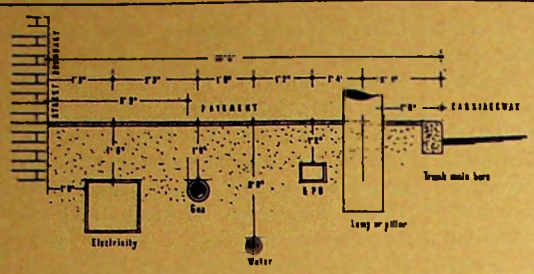
It is, however, quite clear that the Joint Committee did not intend underground services to make such a travesty of civic design. It is quite feasible to accommodate the four underground services in a 6 ft. footway and to place the sewer under the carriageway, unless it can be more satisfactorily located in back gardens. House drains also can normally be located at the rear of dwellings.

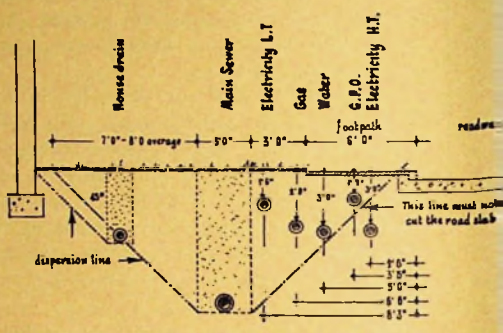
The problem has been magnified to a degree quite out of relation to its true importance and even the order of laying, to which the New Towns Committee attached considerable significance, is of no great moment. The Joint Committee itself said that where an agreed order and depth for the various mains already exists it is not suggested that it need necessarily be altered to accord with their recommendations. In London, each statutory authority keeps its own records of the precise location of services. No doubt the same thing is done in New Towns and a fixed order of laying has no particular value in enabling existing mains to be easily traced. In cities, and certainly in London, cables are normally laid in stoneware pipes from which they can be withdrawn and replaced when necessary. If the New Towns were more compact there is no reason why they should not enjoy the benefits of the same system since the extra cost (if any, in the long run) would be compensated for by the saving on overall length. There are naturally certain general principles to be followed —gas and electricity mains are, for instance, kept apart—but there is no need for towns to be designed round an axis of sewers and telephone wires. If the building of a satisfactory city is established as being the primary objective, the engineering services can and should be adjusted to fit into the pattern.

e. Town Planting

'Experience gained in the extensive planting at Letchworth and Welwyn and other large town estates and holiday towns could be more widely drawn upon.'

'There can be no single and generally accepted principle of landscape treatment. In one case it may be desirable to merge the town quietly into the surrounding landscape, by planting ecologically related to what exists already, with green wedges penetrating from outside into the town area. In another it may be better that the town should stand out sharply from its rural setting, a clearly defined boundary accentuating the distinction between country and town.'





5, three diagrams of underground services: above left, a 10 ft. 6 in. footway; above right, the same services incorporated in a 6 ft. footway, and below, a typical situation at Harlow, where the house-to-road distance is a minimum of 19 feet. Prairie planning becomes automatic before the planner or architect has ever put pencil to paper.

comment These words succinctly convey the unresolved duality of outlook which begs the question of the design of towns although the emphasis rests upon treatments adopted in 'large town estates and holiday towns.' The Committee's preference is for the town-country of the garden estates, not for the country towns such as Bury St. Edmunds; for the romance of buildings placed in landscape, not for the rational urbanity of Oxford, 13. Old Hatfield gives way to Bournemouth, 14, and to ensure the final destruction of the town the planners are enjoined to direct the green cheese-shapes at its heart. The possibility that town and country are distinct entities is almost an afterthought. Parkways should also be mentioned—they have their place in areas of high civic dignity where formality dominates: elsewhere they are ignoble.

f. Byelaws and Building Regulations

'Existing byelaws for building and streets contain redundancies and anachronisms, and they overlap clauses under town planning schemes. Their original purpose was to protect the public from the worst consequence of bad practice by enforcing observances of certain minimum standards. But because they were usually conceived in a period when there was little research and experiment in this field and standards of living were low, many have outworn their usefulness.

'We recommend accordingly that in the special circumstances of a new town the local bye-laws should be revoked and the building regulations in the leases relied on.'

comment It is indicative of the current state of opinion that this recommendation of the Committee, which is worthy of downright support, has not once been put into effect.

g. Neighbourhood Planning

There is one most noticeable distinction between the New Towns Report and the plans it has engendered. Despite the quotations given the Report pleads for unity of the general residential zones—these areas 'should not be further subdivided in the master plan'; 'the character of the town as one of diverse and balanced social composition must be established at the beginning'; 'segregation should be avoided.'

In contrast to this concept of the town as one unit, current planning dogma is increasingly engrossed in the pattern of a neighbourhood structure. For ease of analysis, for statistical purposes and for local relationships between houses, shops and schools this is, of course, wholly legitimate but there is a marked tendency to translate diagrams of social theory into physical development.

It is tempting to prepare a town plan which is little more than a slightly adjusted version of a schematic collection of statistical cells. Having done so, the space between globules cannot very well be designated as anything other than parkways or open space. The result is a series of over-emphasized neighbourhoods of which the inhabitants are unnaturally forced to look inwards to their local centre which is exalted at the expense of the town core itself. Not only is the town sundered in the physical sense, but the sought-after civic unity is endangered and the social advantages of a medium-sized town are lost.

[continued on page 410

6, 7

schools: *compact layout (6, Ricardo Street, Lansbury) contrasted with sprawl which, however pleasant in itself, eats up more land and makes it less likely that the New Town will become a town in fact as well as in name (7, Swan Mead, Basildon New Town).*

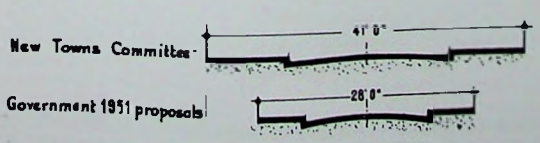
8, 9

open space: *treated like this it is worse than useless (8, Old St. Pancras churchyard. 9, Norland Square, Kensington). Better to keep the town compact and have unlimited open space (i.e. countryside) within walking distance: or, in a city, to keep the parks few, big, and uncluttered.*

10

industry: *10, Manor Royal, Crawley: an irredeemable desert with some pathetic landscaping which doesn't landscape. Half of this view could have been kept as countryside by careful tight planning: many of the factories could have been fitted in with the housing to the benefit of both.*

street widths: *the reasonable Ministry of Housing minimum standards compared with New Towns Committee proposals, 11, and with the Model Bye Laws, 12. The principle of adding 50% to every dimension to be on the safe side just won't work with town design—there is no town left when you have finished.*



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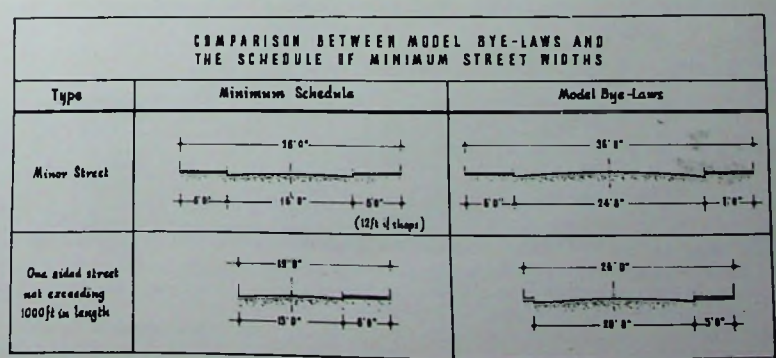

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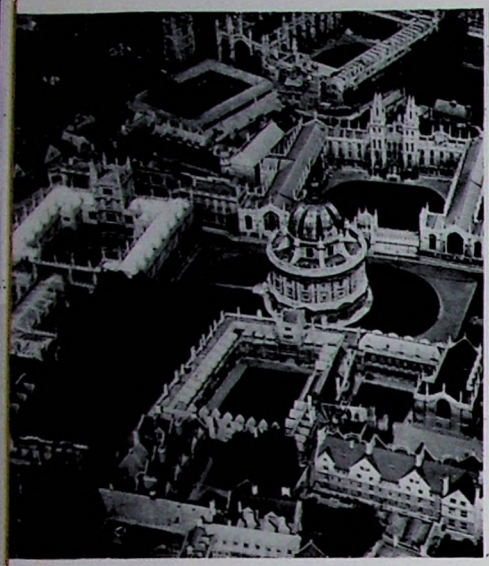
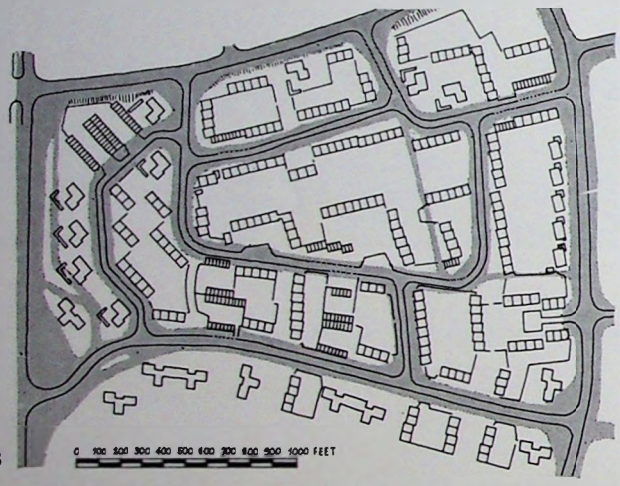


13 **landscaping:** *how a town should look: Oxford,* 13*—economy, supreme urbanity and (for once a true use of the word) amenity. A town from the air should look like an interlocking jigsaw of enclosed spaces—not like a checkerboard of isolated buildings in landscape—*14*, Bournemouth.*

14



15

16

dead ground: *the ground barred to the architect before he even starts to design is shown shaded in the sketch of a housing area in Harlow New Town,* 15*. How can the result help looking like this?—*16*, Peterlee.*

17 **the result:** *fit everything together with a minimum of wasted space and results like this will come almost automatically—*17*, Old Hatfield. Waste the space and the town will never get any better than this—*18*, Stevenage (it could be almost any post-war estate in the country). At the same time the countryside will be over the horizon instead of at your doorstep.*

18

compact towns and true countryside, or a mediocre hybrid?
The choice is presented diagrammatically opposite

continued from page 412]

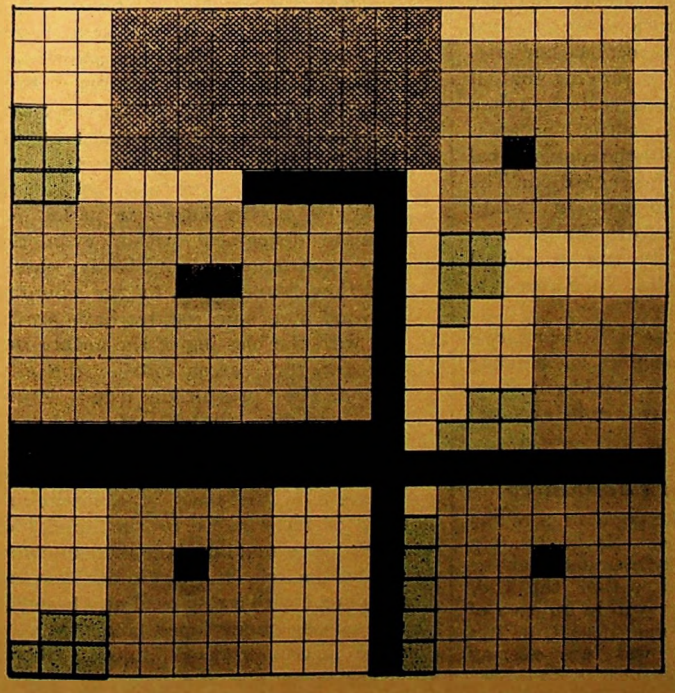
Summary of Section 1:

All these savings may seem negligible in themselves. But, together, they add up to something. Here are, compared, the standards of the New Towns Committee (left), and a revision based on common-sense standards (right) which doesn't treat the land as an expendable commodity and each street as a miniature boulevard; a revision which saves nearly two-thirds of the original area.

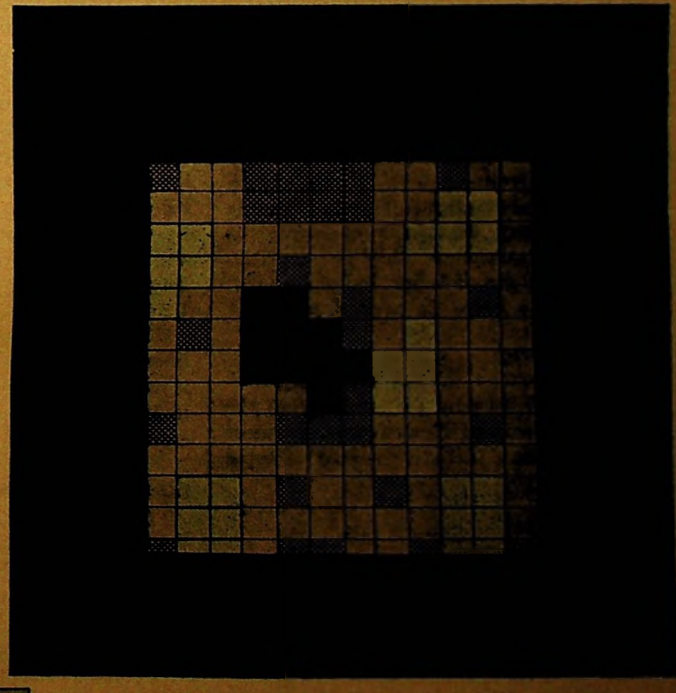
A. NEW TOWNS COMMITTEE.			Acres per 10,000 Population.
Town Centre			10
Industry			100
General Urban Zones:			
Housing (25 ppa)		400	
Schools		50	
Open Space		100	
			550
			660
But the Committee thought this might be extended to			760
which is equivalent to 13 ppa gross density and then, after further consideration, picked on 12 ppa.			
So for a town of 50,000 persons the land required is 4,200 acres.			

B. REVISED PROPOSALS.			Acres per 10,000 Population.
Town Centre			10
Places of Employment			50
General Urban Zones:			
Housing (70 ppa)		140	
Schools		50	
Open Space		10	
			200
			260
But there may be some unusable land and we may adopt			300
which is equivalent to 33 ppa gross density. (Ebenezer Howard suggested 30 ppa.)			
So for a town of 50,000 persons the land required is 1,500 acres.			

town A



town B



Key. Each square represents 10 acres.

= *town centre: fragmentation into sub-centres in town A because of distances involved: one compact centre in town B.*

= *industry: one huge estate in town A; a small estate for the noisy and smelly factories in town B; the rest—including office employment—worked into the town.*

= *housing: space saved in town B largely by reasonable standards for road widths and verges.*

= *schools (assumed the same for both towns).*

= *open space: fragmentation countryside in town A; one central park in town B, plus all the land returned to countryside: 2,700 acres of it. Maximum distance of housing in town A from true countryside — approx. 880 yards. Maximum distance of housing in town B from true countryside — approx. 280 yards. Uncoloured ground in town A is simply space left over—the inevitable result of the 'one for the pot' calculations used in working out the areas.*

2 Economics and Administration are taken together as the next barrier to progress because they combine to frustrate good design in a variety of ways, both directly and indirectly.

Although purely economic questions are not everywhere regarded as being critical they do have a serious effect in some circumstances. The following are some of the ways in which they have done so:

Building Costs

It is well known that in this country high buildings cost relatively more than low ones, even though it is a matter of merely one floor being added to the ordinary two-storey house. The reasons for this rise in price are far less apparent and although some items can be identified without great difficulty there is still a large unknown quantity which creeps into builders' estimates immediately they are asked to work more than a small distance above ground level. In other countries flats are as cheap as, or cheaper than, houses, and it may be simply that their building operatives are more familiar with the constructional techniques involved than is the British workman. Research is continuing and it is possible there will shortly be a change in the relationship between costs of high and low buildings, but, in the meantime, every architect knows that in normal circumstances the introduction of a higher building into a housing layout will be a relatively expensive operation. Moreover, within the framework of the present national economy and especially in the economic circumstances of the New Towns, being largely made up of young married couples with families, it may be difficult to find tenants for flats, excepting in such areas as London. Nevertheless, higher densities involving the use of taller buildings may, in some cases, show an over-all saving.

Land Values

Here are some of the average prices which have been paid for land within the designated areas of New Towns. In most cases the figures include the cost of some buildings:

	Per acre.
Aycliffe	£61
Stevenage	66
Harlow	90
Basildon	96
Peterlee	96
Hatfield	97
Crawley	107
Corby	126
Cwmbran	135*
Hemel Hempstead ...	162*
Bracknell	341

* Year 1952–53

Land, therefore, is comparatively cheap and it is not surprising that it is used liberally, or even wasted. Perhaps there would be a more rational attitude towards the land which is sometimes frittered away if its cost were nearer to the figure of £60,000 per acre which a London Borough on the edge of the City is thought to have paid for a housing site.

Roads and Services

It is apparently cheaper to set houses back from the edge of the street than to construct foundations in such a way as to avoid the possibility of damage by the weight of the building to drains and sewers (see also page 412).

It is apparently cheaper if sewers are placed under wide verges and the slab of the carriageway is of lighter construction than would otherwise be necessary to protect a sewer under the road from traffic vibration.

It is apparently cheaper to grass small open areas in streets than to treat them in a logical and interesting manner with hard surfacing. It is also cheaper to neglect these grass areas than to maintain them properly. (In Crawley maintenance of incidental grassed areas costs 17s. 4d. per house per annum.)

But there is much confusion of thought on the economics of housing layouts which is well illustrated by the Third Supplement to the Housing Manual (Houses, 1953). This dealt at considerable length with four different layouts and, in terms of capital cost, proved that the double footpath access system was considerably cheaper than the others. Mr. J. Mercer has, however, had no great difficulty in proving that, if maintenance and operating costs are taken into account, the double footpath access is the most expensive, whilst the conventional layout is the cheapest. (Paper entitled: 'The Effect of Modern Tendencies in Estate Layout on the Cost of Future Maintenance and Servicing,' read at the Municipal Engineering Congress on November 17, 1954.)

The fact is that there is little reliable knowledge of the economics of housing layouts and the architect should not allow himself to be thwarted by unsubstantiated catch-phrases.

Local Government Economics

'In the year 1821 the population of the City of Norwich was approximately 50,000, and it must be assumed that the majority then lived within the City walls—that is to say, within an area of about one square mile. It is true this only means there was an over-all density of eighty persons to the acre, but it has also to be remembered that, according to one authority, Norwich was then known as the "city of gardens" and there were many more open spaces than are evident at the present time.'

'. . . large tracts of land "ripe for development" towards the outskirts of the city are held by trusts, private owners and the Corporation itself.'

City of Norwich Plan, 1945.
C. H. James & S. Rowland Pierce.

Norwich is a fine city but the many thousands of visitors who savour its particular qualities every year mainly devote their attentions to the city as it was at the end of the seventeenth century—the city within the city walls—not to the city administered by the Norwich Corporation. The passages quoted above point towards the disaster which has engulfed the city and which the authors of the 1945 Plan instantly recognized.

The steps to disaster took place in the following manner:

(*a*) 1821–1871. A limited amount of growth immediately outside the city gates.

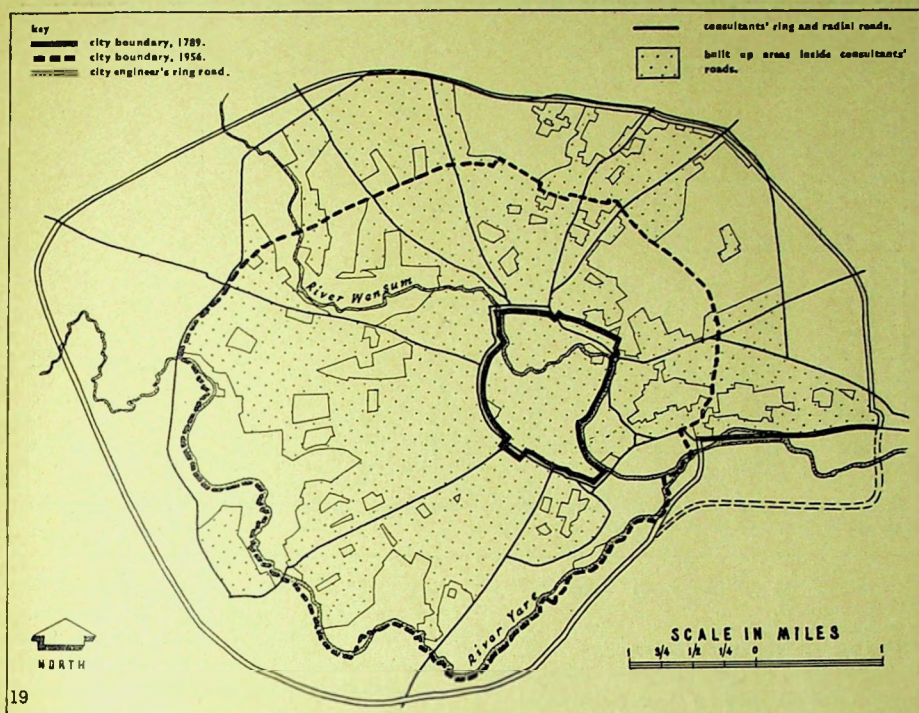
(*b*) 1871–1901. Considerable development immediately outside the mediaeval city—mostly monotonous and unimaginative.

(*c*) 1901–1914. Similar development at a slower rate.

(*d*) 1918–1939. Local authorities became also housing authorities and the Corporation acquired land within its own boundaries on a large scale so as to preserve land for its own use. Municipal housing was undertaken to an extent probably unequalled in towns of a comparable size amounting to about two-thirds of the total number of dwellings built in the period. The original square mile of the city had grown to an administrative area of over 12 square miles. The population was, nevertheless, only 122,000. But, because of the Corporation's acquisitions, and because much other land was held by trusts which were not prepared to sell, there was little land available in the inter-war period for private developers within even the now enormous administrative area. So they leapfrogged to the country beyond and many estates have grown up with the blessing of the authorities for the rural areas outside the city limits. They present the usual picture of sporadic, ill-designed and indifferently controlled growth.

The planning consultants, instructed to proceed on the basis of a maximum density of 60 persons to the acre, had little choice in making their recommendations to encircle the agglomeration of development with a ring road and to cover the remaining undeveloped land with new housing neighbourhoods, allowing liberal areas for new public open space. Inevitably these proposals were accompanied by the suggestion that the administrative boundaries should be further enlarged to fit the new picture.

Within this brief outline of a sad story are discernible some of the factors which have swayed local government decisions:



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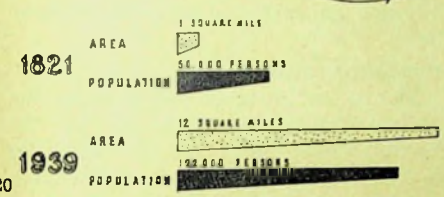


20

19, *Present-day Norwich, a microcosm of the national problem—the empire-building road schemes, the incomplete and gap-toothed sprawl.* 20, *the result: each person in Norwich uses up* five times *as much land as he did at the beginning of the nineteenth century. Is he five times better for it?*

(*a*) An urban authority acquires housing land in advance of its needs so that it will not face a scarcity as the tide of development sweeps onwards. This has, however, now become an element in a town-planning catastrophe.

(*b*) Local authorities, even rural ones, will usually welcome development, however undesirable from a planning point of view, because bigger populations and more rates are good business as well as boosters of prestige.

(*c*) An urban authority will normally wish to extend its area to enclose development beyond its perimeter, so as to gain rates from a population which is in many ways benefiting from the services it provides.

SUMMARY

In terms of direct costs there are problems associated with buildings more than two storeys high which it is hoped will be better understood as a result of investigation now being undertaken by the Building Research Station.

In spite of the proportionately greater cost of building above two storeys, densities higher than those in general use are demonstrably effective in reducing over-all cost per habitable room. The Ministry's Handbook on residential density suggests that it may be possible to attain a saving of, perhaps, 20 per cent of land compared with inter-war practice and at no greater cost by close attention to detail, avoidance of waste, and judicious use of terrace houses and low flats.

The local government approach to economics and administration is a matter of great complexity and sometimes unpredictable results. Galloping expansion is apparently stimulated by the present arrangements, and it seems that control of the situation was lost when the administrative boundaries of a town were no longer identified with its physical boundaries. The first step was not an unreasonable one—the town was expanding and those forced to live outside the walls should not evade their responsibilities to the city fathers—but subsequent steps have contributed largely to the abandonment of the city as a recognizable form.

The Minister of Housing and Local Government has suggested a method of checking future unrestricted sprawl by the formal designation of Green Belts around built-up areas. This is wholly admirable and the Minister will, no doubt, enhance his high reputation by vigorously pursuing the achievement of this aim. We have long been too much afraid of drawing a line—in fact, we stop at nothing where landscape is concerned. In new and expanded towns, and in others where possible, there is everything in favour of locating public open space in these Green Belts. The barrier would then be doubly effective, for land acquired under the Open Spaces Acts and dedicated to public use is protected from building to a degree unattainable in almost any other way. There will be cases where population within the belts will grow and a healthy pressure will be exerted upon available land. Economic trends will bring about a greater appreciation of the real value of land and building technicians as a group will be asked to exercise their skill in obtaining the maximum return compatible with the observance of recognized standards, instead of being doomed to dally with the Englishman's concept of his bungalow-castle.

But, in the meantime, public opinion is in favour of the semi-detached house at not more than 8 to the acre and in most areas the speculative builder who departs from this formula is heading for bankruptcy.

3 New Streets Byelaws

Overall street widths are probably the most critical of the difficulties to be overcome in designing a town. Even recklessly low densities can be at least partially concealed if a coherent street picture is maintained, but houses riven by gusty runways are doomed to eternal scatterdom.

Our street byelaws are designed upon the still prevailing practice of laying down a road pattern which is the dominant characteristic of the area. Buildings are subsequently appended and any relationship they may have to each other is fortuitous. The opposite approach of designing buildings in grouped relationships and evolving a road pattern to suit them leads to consideration of *daylighting and sunlighting*. These are the factors determining the spacing of buildings which can be defined with some precision and allowed for in the process of manipulating the architectural balance.

Mr. Frederick Gibberd has made it clear that 'the architect cannot always place his building as near to the road as he may wish, and a close relationship of dwellings to each other is impossible.' That it is not the important matters of natural illumination and insolation which frustrate the achievement of this relationship is soon established. The Government accepts an angle of 25° between facing terraces of houses as being sufficient to provide daylight to the excellent standards recommended by the Department of Scientific and Industrial Research. Two-storey flat-roofed houses need be only 88 ft. apart. With a roof-pitch of 80° the distance is about 46 ft. In the same conditions, three-

becomes available, due to redevelopment of the inner areas? Extensive developments at these low standards may well, in the future, place upon Hertfordshire the further burden of untenanted property and the matter calls for very careful consideration.'

comment These questions well exemplify the clouds of confusion which beset the density issue. The simple answer to the Council's questions is that it is quite feasible to develop at densities in the region of 70 to 100 persons or rooms per acre in residential areas which will provide satisfactory living conditions and which will be the subject of vigorous demands for the whole of the foreseeable future; the assumption must be made that these residential areas will be planned either as parts of new towns, or as extensions to old ones, and that the occupants will be provided with workplaces and with all necessary social facilities.

Any attempt to clarify and deal with the other weighty matters posed in the questions would be a formidable task and one which is hardly relevant to a decision as to the appropriate size for a garden, but it may be said that if people decide to return to London from the New Towns it will be because of the failure to build and create satisfactory townships in the full architectural, social and economic sense and not merely because the gardens are smaller than it is imagined they should be.

Density

The report continues with an examination of the cases for high and low density. The arguments for high density are stated as being:

The agricultural—loss of farmland.

The financial—high density shortens roads and services enabling rents to be lowered. It reduces demand on public transport. It conserves building materials.

The cheapest form of housing is two-storey terrace building to a high density.

comment No doubt other reasons for higher densities will come to light and the matter will be considered by the Council on a broader basis at a later stage.

* * *

The case against high density is dealt with by:

(*a*) The reply to the agricultural case: If density is 'increased to the extent of insisting that 20 per cent of families should live in flats, and the bulk of the remainder in small terrace houses, it is unlikely that a saving of more than 70–80,000 acres (in England and Wales) could be achieved.'

'When the size of the plot is reduced much below one-twelfth acre, the available area becomes insufficient to include a vegetable garden.'

'The only effective way of saving agricultural land would be to halt all development of new land and to rehouse the population in flats within the existing built-up areas. This is, of course, a Continental solution to the problem.'

'The 12 to the acre density has been accepted as a maximum for the development of new sites, since the reports of the Tudor Walters Committee in 1918 and experience has shown it to be by no means overgenerous.'

'Private enterprise housing in the County, under severe building restrictions, has not averaged more than six to the acre since the war, and indicates the size of garden which is provided when the choice rests with the individual.'

'From the point of view of Civil Defence, low density or "dispersal" is likely to be more valuable in the future than in the past.'

'There is no hope of the country being self-supporting in food, and it would be absured to spoil the living conditions of the urban population in pursuit of the unobtainable ideal of national self-sufficiency in food production.'

(*b*) The reply to the financial case:

'Any policy for raising density by a substantial increase in the proportion of flats to houses would lead to a sharp increase in cost, since the extra cost of flat dwellings exceeds any saving on services and roads.'

The report concludes that low density wins.

comment 80,000 acres—125 square miles—one MORE conurbation greater than the area of London County imposed on this disappearing island. In more familiar form it is a strip of subtopia 1½ miles wide stretching from the Wash to Colchester. It is the area of 13 new towns the size of Harlow, IN ADDITION to a further 400,000 acres or 750 square miles required for development generally during the next 20 years.

The un-British approach to town planning is, of course, acceptable to no-one, particularly to the many millions of people who wish to buy their vegetables from a greengrocer's shop and private enterprise has for a long while demonstrated its infallibility, but it is difficult to understand how the hydrogen bomb will distinguish between the 12-to-the-acre men and the rest.

* * *

The next step of the report is to define the limits of high density housing.

'. . . simply on daylighting (i.e., health) grounds, the minimum distance between houses might be put at 70–75 ft., or an approximate density of 22 houses (77 persons per acre) to the net acre. It is contended that such a density is only justifiable in the re-development of central areas in large cities where it is imperative to rehouse as many people as possible on the same site, in order to keep them near their work.'

The report considers that the distance between the *rear* walls of houses should, however, be not less than 150 ft. (for reasons of privacy) and, with this figure combined with a distance of 72 ft. between front walls, arrives at a typical maximum net density of 14.6 houses or 51 persons.

'In suggesting a maximum average density of 14.6 in place of the 12 houses per acre in general use, the Committee have been mindful of the agricultural and economic pressures referred to . . . above, but they view this higher figure as a maximum which needs to be relieved with areas of lower density if a monotonous appearance is to be avoided and if the new community is to have an opportunity to develop a sound social structure.'

The density of medium density housing is arrived at by a similar process. By analysis of a cross section of the weekly incomes of some of the householders living within 15 miles of Charing Cross it is deduced that:

60 per cent of houses should be at 13.3 per acre.

25 per cent of houses should be at 8 per acre.

15 per cent of houses should be at 6 per acre.

Giving an average overall density of 35 persons per acre. A neighbourhood of 10,000 persons is estimated to require 463 acres, including schools and open space.

comment Whilst it is noticeable that the neighbourhood area is still nearly 100 acres less than the figure adopted by the New Towns Committee, it is difficult to accept the process of reasoning set out above as a basis for the density structure of a county. The question of daylighting has already been dealt with above and whether the monotony of a density of 14.6 houses per acre can be relieved by reducing it in places is a matter for discussion.

The distance between buildings necessary to preserve privacy is one upon which there is little agreement. Generally, the authorities which prefer low density like more privacy, e.g.:

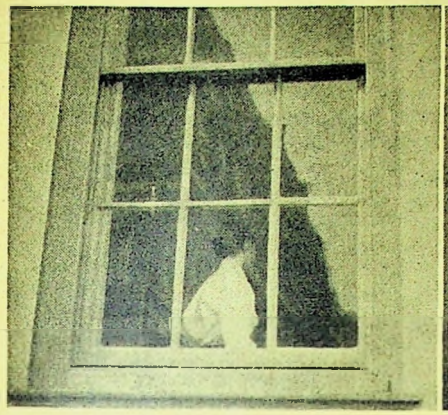
Hertfordshire	150 ft.	privacy	distance.
Hatfield	100 ft.	,,	,,
Harlow	80–90 ft.	,,	,,
Coventry			
Houses	80 ft.	,,	,,
Bungalows	40 ft.	,,	,,
London	60 ft.	,,	,,
Wrexham	60 ft.	,,	,,

The photographs, 25-29, suggest that privacy depends far more on the distance of the inmate from the window than on the distance from the window to the observer.

Certainly a great deal of the need for privacy can be met in the design of the houses themselves, but it is remark-

privacy:

subject near window

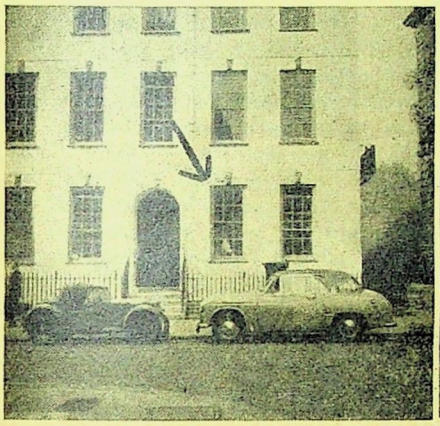


25

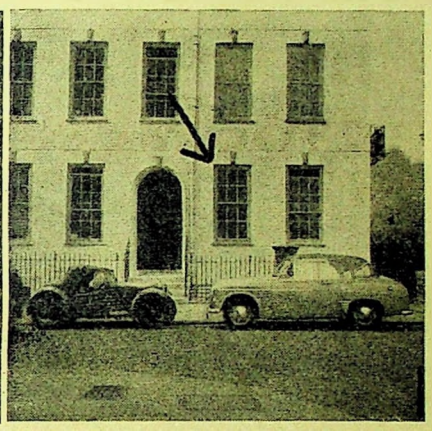
subject 12 ft. inside room

26

10-ft. distance: *subject is clearly visible when in front of window,* 25, *but can only be seen dimly when standing* 12 *feet inside the room,* 26.



27



28

52-ft. distance: *subject still clearly visible in window,* 27, *but has disappeared entirely when standing back,* 28. *This is the distance beyond which it was impossible to see to the back of the room. (The minimum privacy distance adopted in London is* 60 *feet.)*

29

145-ft. distance: *subject close to window is still without complete privacy. The vanishing distance is about* 250 *feet.*

Summing-up: 'complete privacy,' as an object attainable by increasing the distance between houses, is largely an illusion. To attain it nearly 100 *yards is needed between houses, which even Hertfordshire might agree was impracticable; and* 150 *feet is still not much use if you persist in undressing in the window. 'Common-sense privacy'—i.e. privacy at the back of the room—is attainable at a minimum distance of about* 50 *feet, as thousands of Londoners know.*

able that the general clamour for isolation emanates from many who voluntarily congregate at holiday-times in our overcrowded resorts instead of seeking the fast-disappearing remote country-side.

5 Building Byelaws

These are not a great barrier to improved design, but the byelaws which deal with Space about Buildings can be the cause of annoyance, if interpreted inflexibly.

Very frequently a byelaw will require an open space immediately in front of a domestic building, extending throughout the whole width of its front to a distance of not less than 24 ft. This seems reasonable, until the district surveyor rejects the corner treatment on the ground that the flank wall must be called 'the front.' His decision involves widening the corner space to 24 ft., so destroying the sense of enclosure.

Other byelaws often demand at the rear of a domestic building 'an open space exclusively belonging thereto and of an extent not less than three-hundred square feet.' This also has to extend throughout the entire width of the building. Whether a corner treatment involving a house with a small patio would comply is a matter for conjecture.

The root of the matter is that byelaws, like other restrictions, are almost all related to an anachronistic concept of the development they affect. Any design which discards the old approach is apt to be rejected for the reason that it fails to fit to a pattern of rigid rules; not upon a fair evaluation of its own qualities.

6 Garages

The provision of space for motor cars in a contemporary housing layout calls for great ingenuity if densities are not to be greatly reduced, particularly as the requirement is gradually being accepted as one car space for every two dwellings.

30

31

garages: *present-day standard solutions are either a separate garage—a tiny box for the car attached to the little box that is the house,* 30, *or no garage at all,* 31 *(Hendon Way). Garages can be fitted in without chaos, see illustration* 32 *and the garages in Horndean Close on page* 423.

The speculative developer solves the problem by leaving space for a garage at the side of a house, 30. The cost of the garage building is, perhaps, £70.

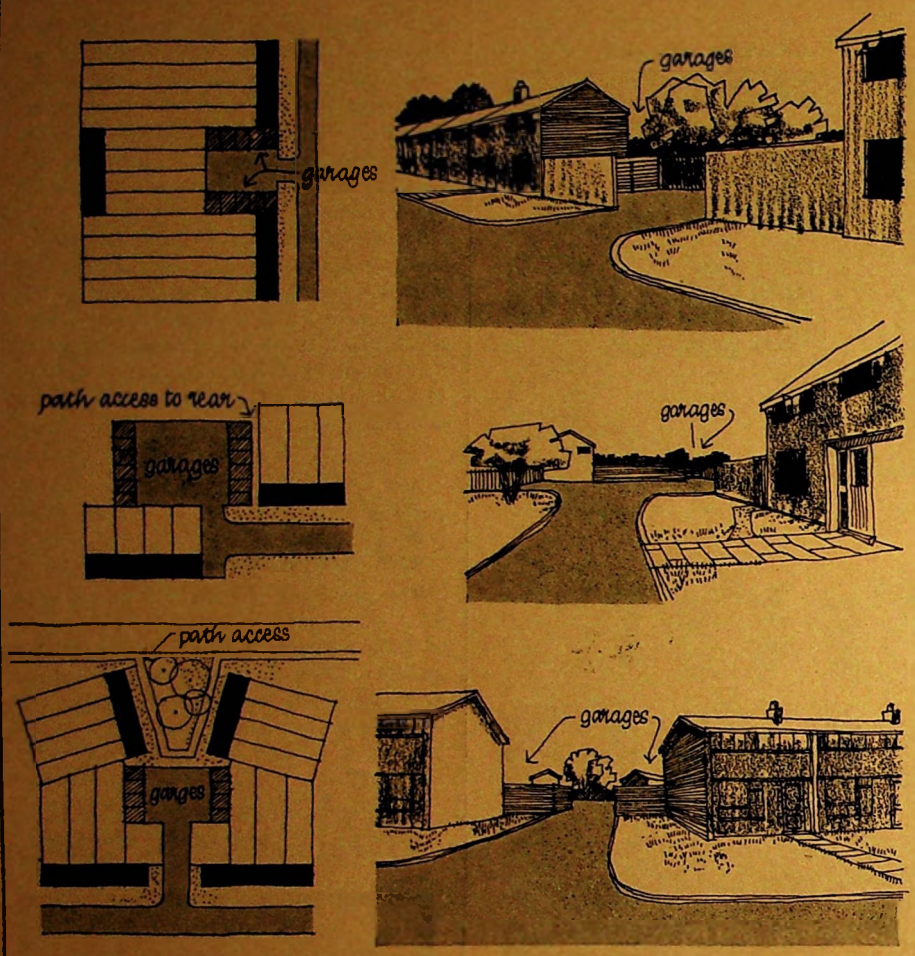
Cars parked in front gardens are a familiar unpleasant sight, 31.

If the garage is built into the house it may cost £250 extra.

If street parking is to be accepted, then carriageways must be even wider, or alternatively verges (wide enough to take a car) must be paved.

Multi-storey garages will cost at least £600 per car.

The three layouts illustrated, 32, are all in use at Harlow and combine the economy



82, three layouts at Harlow New Town for garages fitted into a housing pattern in a way that adds to the rhythm of houses and streets instead of inhibiting it.

of the speculative builder with the virtues of considered civic design.

The Potentialities of Rational Standards

The simple conclusion which emerges from consideration of all these influences directed towards the design of residential areas is that they are imposed without any regard to civic-architectural qualities. The combined effect is that the architect is barred from carrying out development which has the character of a city. He will be beset by worn-out planning theories and their derivatives, planning controls, which are so frequently incapable of justification. He will be the slave of engineering requirements as to roads and services. Much of the pressure to which he will be subjected is the product of fear—fear of the kind of development which took place under bylaw control combined with a lack of faith in the ability of the contemporary architect to assess and provide for the needs of man in his home. This fear is exemplified by one of the arguments which has been employed against urbane layouts to the effect that approval would commit the planning authority to acceptance of inferior development by the speculative builder—development which might conform to the same analysis in terms of density, spacing and road-widths, but which would be the antithesis of the other in terms of civic design.

Faced with these heavy odds, the architect will also have other forces to combat. Of these, economics will be to the fore, since it is generally accepted that the profitable disposal of sites depends upon the creation of new suburbias, whilst even in the residential areas of central London it is now safest to speculate with houses of comparatively low density. The architect must himself bear some of the blame for the currently high building costs which limit variety in architectural composition, but he cannot easily change public opinion which has been nurtured on a distorted garden-suburb philosophy and which will not be altered until the advantages of some alternative examples are there for it to see.

Meanwhile the contemporary movement within the profession towards building high has been greatly influenced by l'Unite d'Habitation and the thought of which it is the expression. But the motives of M. le Corbusier are very similar to those of the exponents of low density—the subjection of the city to the natural influences of sun, air, trees and grass to such an extent that the neuter town-country emerges. Their respective solutions are opposite extremes with a common romanticism.

In the British scene there is room for derivatives of both extremes and where higher densities of about 200 persons per acre are the aim the current emphasis on open planning has led, quite naturally, to acceptance of a pattern of high buildings which are well lighted and enjoy good insolation, as well as the benefit of whatever distant views may be available. Practically the only examples to be found in this country are in London. These are buildings in landscape, and they serve their purpose best when used as part of an area of comprehensive development in order to free land for a variety of lower buildings which meet the needs of different sections of the population. Architecturally they provide point and contrast; by careful placing and design they can give grace and form to a city skyline.

But the city in the British tradition demands artifice and continuous close building. It is not a composition of buildings set in a park, but a dignified expression of social integrity in which man's work predominates. Grass and trees may appear as elements in the scene, but their position is one of subordination to the elegant declaration of human skill and contrivance.

There is, therefore, emerging a form of layout, in which different kinds of residential accommodation are adapted to the varying demands of the inhabitants, designed to fit the many different kinds of family which can be identified by a simple social survey. Some high buildings are employed, but only when and where they can be justified on social and civic design grounds. They are not permitted to disintegrate the composition of streets and squares which form the main pattern of the neighbourhood. Roads are adequate for traffic, but not expressions of the dominance of the motor car, and pedestrian ways are their equal in importance.

Such urban compositions as these point the way to a new solution of the problem of living in cities, but, in most places, the architect is denied freedom to exercise his abilities, and layouts which do not conform to the many irrational controls now in force are not permitted.

On the next four pages are examples, old and new, of the result of applying rational standards to housing layout

rational standards: 1. Horndean Close, Roehampton

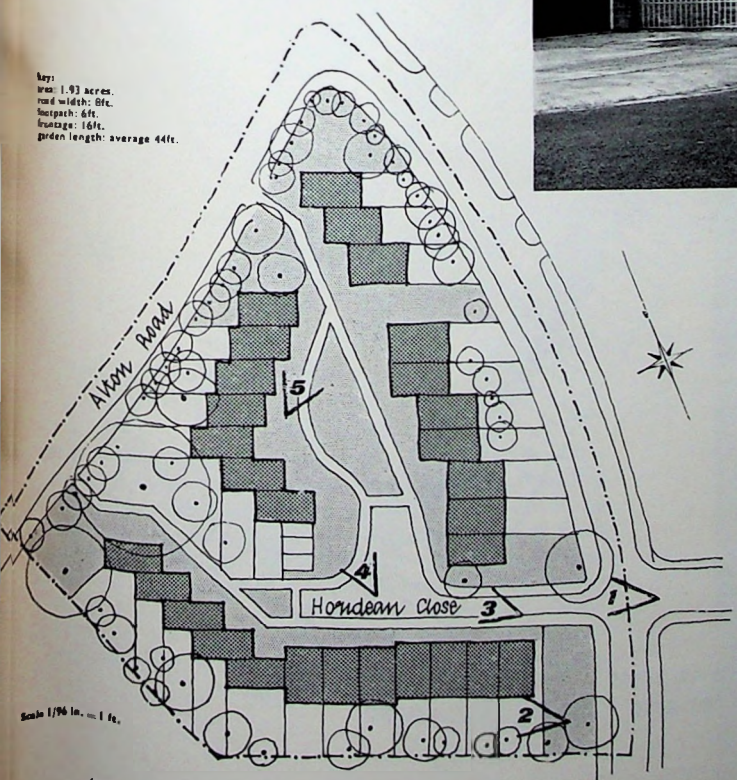
1

2

3

Urban houses can be at a high density without losing any of the traditional amenities if the space around them is carefully used. This is part of the L.C.C.'s Alton Estate at Roehampton, built in 1955. The viewpoints are indicated on the plan below: 1 shows the way in which the houses are painted in sequence from cream to deep green, 2 shows a typical back garden. The density—in spite of being a corner site—including all the surplus road inside the dotted boundary on the plan, is approximately 70 rooms per residential acre, which can be considered as 70 people per acre.

4



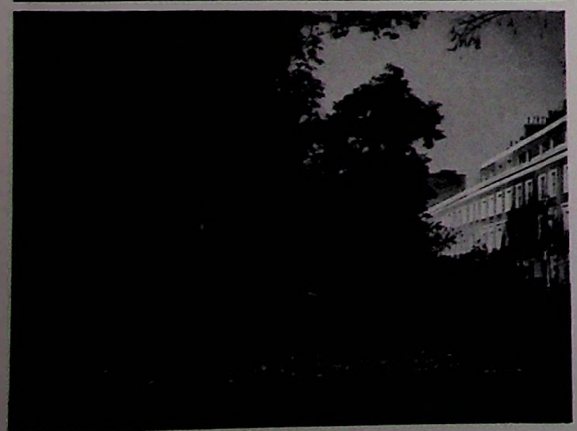
5

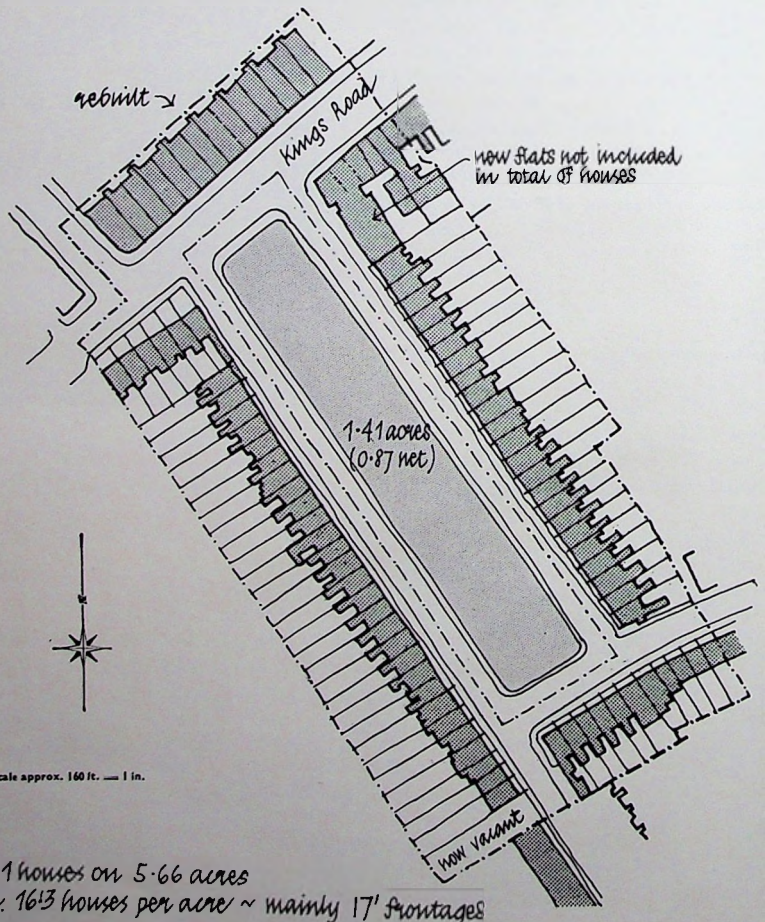
rational standards: 2, London Squares.

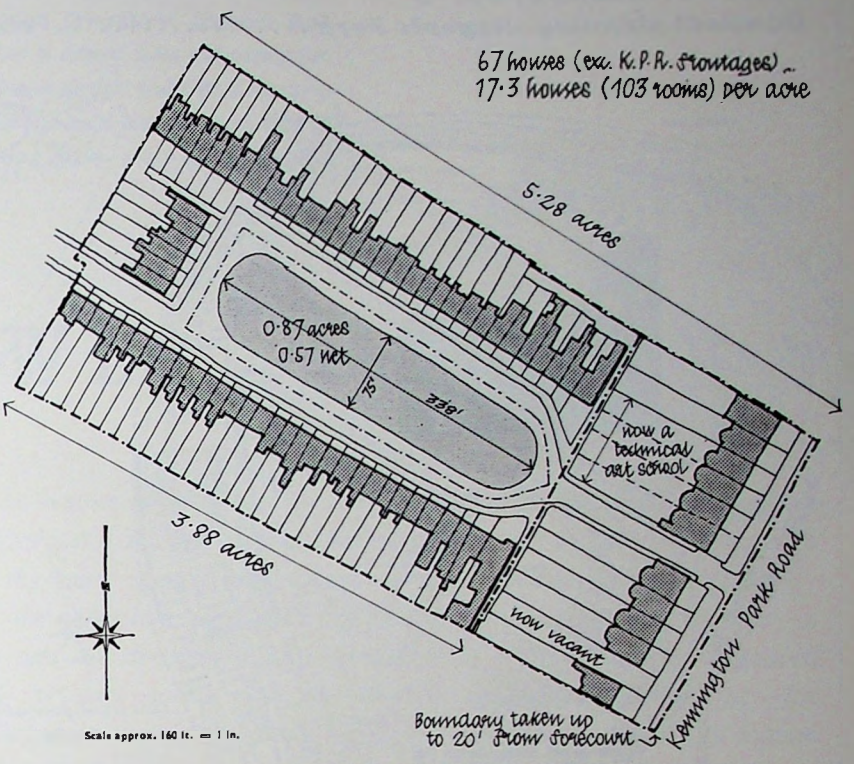
Everyone admires the urbanity of the Georgian and Early Victorian squares of London; few people have thought to examine to what density these truly 'desirable residences' were built. Here Elizabeth Denby analyses three of them: one Georgian, one Early Victorian, and the third a remarkable piece of early twentieth-century revival, built just before the bye-laws and misapplication of garden city principles castrated urban design in England. Now we produce, at best, 'buildings in landscape'—a suburban idea, and a very fine one, but useless in a town. In the table below 'gross density' (col. 4) indicates houses per net residential acre. At 5 to 8 rooms per house, this gives densities of 120 to 150 people to the acre (the New Towns Committee recommended 25 p.p.a. net) and includes not only private gardens but 'open spaces' finer and safer than any recreation ground or left-over derelict plot.

Vital statistics						measurements taken from 1/1250 O.S.					
			col. 2 ÷ col. 3								
	NUMBER OF HOUSES	TOTAL ACREAGE	GROSS DENSITY	GROSS ACREAGE OF SQUARE	DENSITY OF HOUSES ALONE	Normal frontage	Normal depth of back garden	Depth of house	Front garden	Pavement	Road
1	2	3	4	5	6	7	8	9	10	11	12
Paultons Square, Chelsea	91	5·66	16·1	1·41	21·4	17'0"	70'0"	30'0"	5'	5'	24'
Cleaver Square, Southwark excluding Kennington Pk. Rd. frontage	67	3·88	17·3	0·87	22·2	15'6"	65'0"	25'0"	6'	7'	22
Courtenay Square, Lambeth	38	1·53	24·8	0·29	30·6	15'7" or 18'0"	40'0" or 28'0"	22'0"	5'	7'	13'

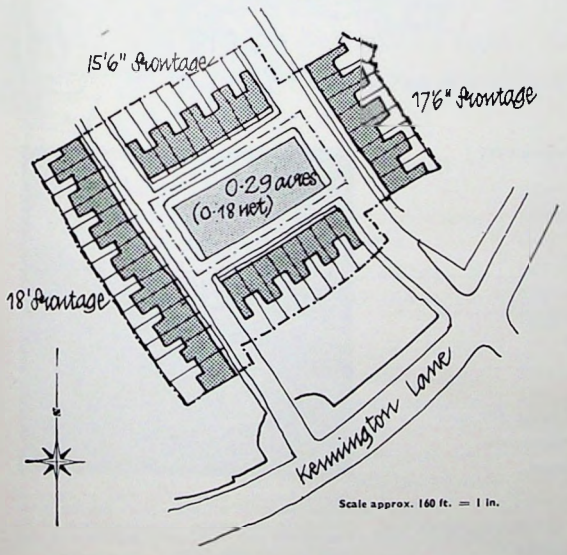
a: Paultons Square, Chelsea—c. 1840 *with individual gardens and communal (tenants only) central space. Built for artisans, now largely gone up in the world and expensive. Below, north-east side of square; bottom, the central garden.*



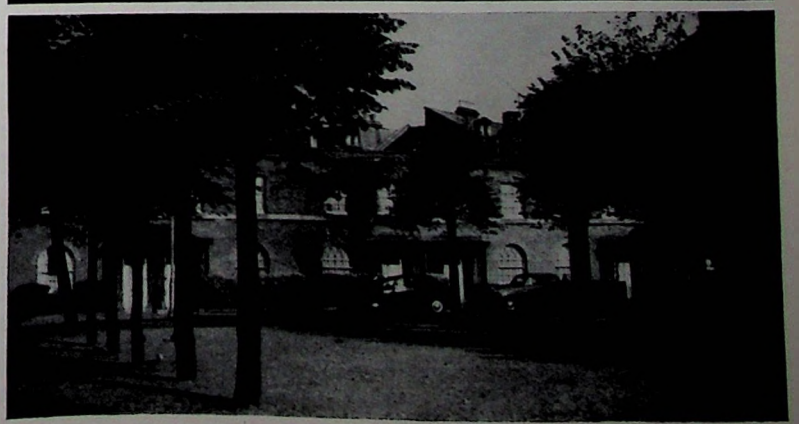




***b: Cleaver Square, Lambeth*—1800–1820,** *two- and three-storey terraces. Still largely working class, it forms the perfect pattern for housing large families in an urban way. Several squares like it have been pulled down in Southwark since the war to be replaced by all-flat estates which are often at no higher density. Meanwhile the large families move out twenty miles to estates like Oxhey (see overleaf). The central space has been unhappily municipalized with asphalt and jaded shrubs, but the houses themselves remain unspoilt. Above, part of north-east side of square.*



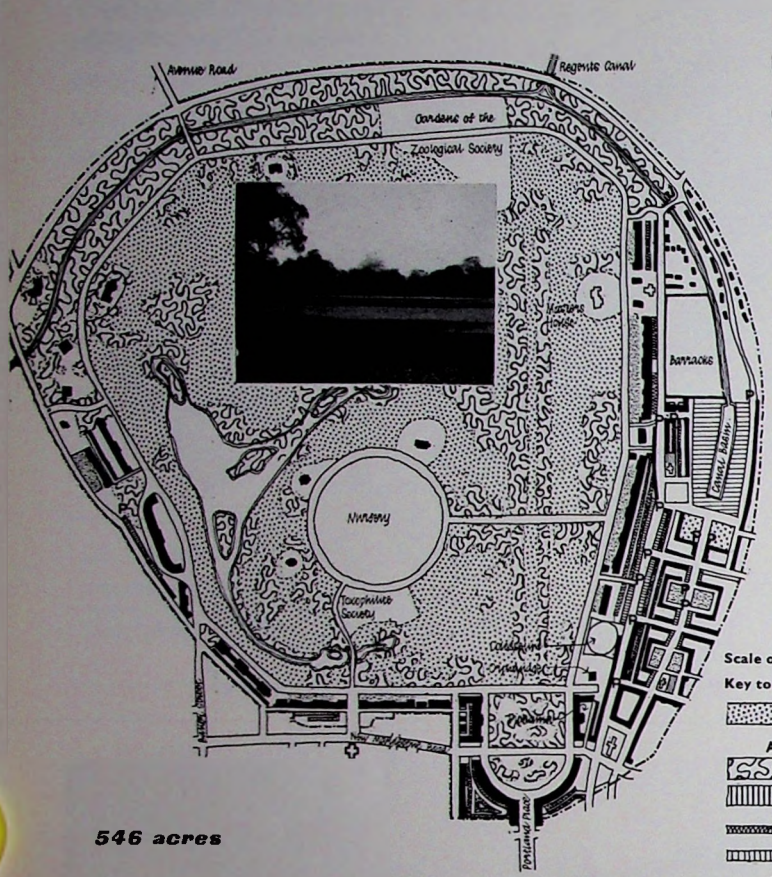
38 houses on 1·53 acres
ie. 24·8 houses per acre



***c: Courtenay Square, Lambeth*—1914,** *part of the extraordinary Duchy of Cornwall housing designed by Adshead and Ramsay; almost the only buildings in the dim history of Neo-Georgianism to take a common-sense view of 'revival' and produce what was effectively a Georgian design—with Georgian economy of space and consequently Georgian urbanity (today's Duchy buildings at Kennington make a sad contrast). Central space open and beautifully cared for, trees and gravel: houses impeccable. Above, the north-west side; below, the central open space.*

Rational standards: 3

Compact planning—Regents Park ..... contrasted with Sprawl—Oxhey, Herts.



546 acres

527 acres

Scale of both plans approx. 1:1500

Key to both plans

- Amenity open space
- A Allotments
- Planting
- School Sites
- Mews and garages
- Shops
- P Pub
- Communal (not Public) gardens
- Church
- Industry

Family housing: Regents Park: Clarence Gardens—worn out and due to be replaced, but still trim. These houses, at 132 rooms per residential acre, have small private gardens and share a large common one, quite apart from Regents Park.

Flats: The terraces encircling Regents Park are at 104 large rooms per residential acre and are the equivalent of what we would today build as flats. They face uninterrupted parkland and their backs are a hundred yards from shopping streets.

Comparative statistics:

		REGENTS PARK CROWN ESTATE			OXHEY HERTS L.C.C. ESTATE		
TOTAL AREA		546 acres			527 acres		
RESIDENTIAL AREA		115 acres			334·86 acres		
	FLATS	—			384		
	HOUSES	1765			3839		
	TOTAL	1765 dwellings 12116 rooms			4223 dwellings 14017 rooms		
	DENSITY	105·3 rooms per acre			41·8 rooms per acre		
NON-RESIDENTIAL AREA		431 acres			192 acres		
	CHURCHES		1·61			6·85	
	SHOPS	6·0		(within residential area)		8·24	
	GARAGES		—	. . .		2·0	
	PUBS	1·0		. . .		4·23	
	SCHOOLS		1·53			94·12	
	ENTERTAINMENT		2·29	Diorama, Colosseum		0·58	site for corema
	PARK & WATER		392·29	Regents Park	4·0	11·70	[illegible]
	INDUSTRY		14·07	including Canal Basin		—	
	POLICE STATION		0·59			0·50	
	ALLOTMENTS		—			15·27	
	COMMUNITY CENTRE		—			13·0	
	OTHERS		8·62	Orphanage ·5 Barracks 7·87 Pantechnicon ·25		5·0	Reserved sites 3·5 Estate Office ·5 Station approach 1·0
	OTHER HOUSING		10·0	villas in Park		30·65	Sandy lane housing
GRAND TOTAL		546·0 acres			527·0 acres		
GROSS DENSITY		22·2 rooms per acre			26·6 rooms per acre		

i.e. Regents Park provides nearly as many rooms as Oxhey on one-third of the residential area. The result is that the land left over provides London's biggest and best public open space; and the housing—half of it, alas, now demolished—made up the most coherent urban landscape in London.

Family housing: Oxhey. The familiar layout of cottage estates at 42 rooms per residential acre: wide roads and verges, long distances to shops. The schools take 94.12 acres against only 11.7 acres of public open space.

Flats: The alternative now offered to families within cities. This L.C.C. estate at Woodberry Down, Stoke Newington, has technically an excess of open space per dwelling and is at 120 rooms per residential acre—less than Clarence Gardens.

The comparison opposite shows the difference between rational standards and land-grab; it is also a comparison between true urban development (Regents Park is under a mile from Oxford Circus) and sprawl (Oxhey is sixteen miles and twenty-two weary Tube stations from Oxford Circus; it and its like have ensured that Oxford Circus is now twenty miles from the countryside). The article below examines the mechanics of sprawl and particularly the figures on which the present official policy of overspill and decentralization is based.

Elizabeth Denby

OVERSPRAWL

No one can feel happy as he looks at the results of 35 years' ardent housing and town-planning effort. Indeed it is no new thing to hear a Minister extol the immense output of new homes in the first part of a speech and deplore, towards the end of the same speech, the ribbon rash and sprawl which increasingly spoils the countryside. We have pursued the same housing policy unflinchingly throughout those years—a policy of high-density flats within a town and low-density cottages outside it: a policy that is now geared to the machinery for decentralization to produce nation-wide sprawl. The time is ripe—over-ripe—for looking back into the towns, and particularly into the old industrial areas, redeveloping according to human needs—that is, planning with, *not* for *(or against!) the people.*

This is possibly our last chance to 'stop, look and listen'; to analyse, to justify, and to reassess housing needs and housing possibilities before turning on the green light for the desperate policy now proposed of overspill and decentralization; a policy at odds with the population and density figures given below.

The Barlow Commission, reporting in 1940, recommended:

(*a*) The continued and further re-development of congested urban areas.

(*b*) Decentralization and dispersal both of industries and of industrial population from such areas.

But the great industrial areas whose decentralization is still considered so urgent would appear to have solved their problem already. Industry and people are no longer attracted to or by them but are flowing from the land once rural, now foul and scarred, to new agricultural areas.

The population of England and Wales increased between the 1931 and 1951 Censuses by 9.5 per cent (3,792,547 persons). But only half a million of this increase was in the six old industrial areas as a whole:—

S.E. Lancashire actually declined by 0.2 per cent—5,911 persons.

Four were roughly static :—

		Persons
Tyneside increased by	1.0%—	8,246
Greater London by	1.6%—	130,464
West Yorkshire by	2.2%—	36,771
Merseyside by	2.6%—	35,582

Only the West Midlands increased appreciably and that by 15.7%—303,743 persons.

A new Industrial Revolution is taking place, this time by deliberate planning policy. The swing of industry and population into Professor Eva Taylor's famous agricultural 'coffin'; the significant increase in the Eastern, South-Eastern and Southern Regions; the New Towns built on first-class agricultural land; the 21 immense new housing estates built by the London County Council to accommodate their 'overspill'—eleven of them in their own green belt; the towns now to be expanded throughout the land to take 'overspill' from other cities, again in rural areas; the recent unofficial new towns such as Donnington in Shropshire, to house the evacuated Woolwich Arsenal Stores, or Fawley oil refinery on Southampton Water, or the oil refinery on the Isle of Grain in the Thames estuary, were all sited on good agricultural land, although alternative derelict areas or towns were near and begging for rehabilitation (viz., Oakengates, Gosport/Lee-on-Solent and Sheerness respectively).

A few figures showing the decline of the huge industrial towns and the encroachment of population on rural districts are relevant here.

In 1931 there were 638 rural areas, which by 1951 had been reduced to 479, thereby transferring nearly one million persons from the rural into the urban category. Yet the actual number of people living in this reduced area rose from 8,000,459 persons in 1931 to 8,422,820 in 1951 and to 8,676,440 in 1955.

Housing returns show that between April 1, 1945, and December 31, 1955:

547,066 new permanent homes were built by large towns and cities (i.e., over 75,000 population).

489,103 new permanent homes were built by medium towns and cities (i.e., over 25,000–75,000 population).

361,665 new permanent homes were built by small towns (i.e., 25,000 and under).

126,254 new permanent homes were built by the LCC and metropolitan boroughs.

458,920 new permanent homes were built by rural districts, of which only 40,023 were let to agricultural workers.

Between April, 1945, and December, 1955, over half of all new homes in 10 English and 5 Welsh counties were built in rural areas. In addition, between 1931 and 1951, 57 out of the 79 English county boroughs enlarged their boundaries, as did 207 out of the 278 municipal boroughs and 349 of the 498 urban districts; 83 per cent of the rural districts (347 out of 419) had their boundaries reduced.

TABLE 1: THE PROOF OF ROT IN THE CENTRE, SPRAWL ON THE OUTSKIRTS

The counties which changed most between 1931 and 1951 were:

Population Increased.	% Increase.
Hertfordshire	52.0
West Sussex	42.9
Buckinghamshire	42.3
Bedfordshire	41.4
Middlesex	38.4
Surrey	35.6
Oxfordshire	31.5
Berkshire	29.4
Flintshire	28.5
Kent	28.2

i.e., nine out of ten were on the outer ring of Greater London.

Population Decreased.	% Decrease.
Durham	1.5
Monmouthshire	1.6
Brecknockshire	2.2
Glamorgan	2.2
Cardiganshire	3.5
Merionethshire	4.0
Carmarthen	4.1
Montgomeryshire	5.1
Radnorshire	6.2
London	23.8

The towns which increased or decreased most were:

Increased over 50% (27). In or very near Greater London (23).	% Increase.
Ruislip, Northwood	325.8
Chigwell	216.9
Chislehurst and Sidcup	208.7
Hayes and Harlington	185.6
Bexley M.B.	171.9
Hornchurch	164.4
Orpington	145.0
Romford M.B.	132.5
Harrow	127.1
Carshalton	119.7
Surbiton M.B.	101.1
Wembley M.B.	99.7
Slough M.B.	97.7
Epsom and Ewell M.B.	93.2
Merton and Morden	81.0
Uxbridge M.B.	75.4
Sutton and Cheam M.B.	66.8
Enfield	63.0
Ealing M.B.	60.4
Coulsdon and Purley	60.2
Esher	58.0
Luton M.B.	56.6
Barking M.B.	52.5
Others (4).	
Huyton with Roby (Merseyside)	973.0
Solihull (Nr. Birmingham)	167.9
Scunthorpe M.B. (Lincs)	60.7
Gosport M.B. (Hants)	51.5

Decreased (23). In or very near Greater London (7).	% Decrease.
West Ham C.B.	41.9
London A.C.	23.8
Tottenham M.B.	19.5
Leyton M.B.	18.0
East Ham C.B.	15.1
Walthamstow M.B.	9.0
Brentford and Chiswick M.B.	6.1
S.E. Lancs and Merseyside (9).	
Salford C.B.	20.3
Oldham C.B.	13.6
Burnley C.B.	13.5
Blackburn C.B.	9.4
Manchester C.B.	8.2
Rochdale C.B.	8.2
Liverpool C.B.	7.8
Birkenhead C.B.	6.0
Bolton C.B.	5.7
Wales (2).	
Rhondda U.D.	21.2
Merthyr Tydfil C.B.	14.1
Others (5).	
Great Yarmouth C.B.	10.0
Smethwick C.B.	9.5
Gateshead C.B.	7.7
Portsmouth C.B.	7.5
South Shields C.B.	5.8

It will be seen that all these 27 *increases* were *outside* the 'conurbations' and not in the big centres themselves. In the main they were not only on good agricultural land, but in the Home Counties. Of the 23 *decreases*, all are in the *centres* of the old industrial areas, one being the London Administrative County itself and 17 being county boroughs, of which 9 were in the S.E. Lancashire and Merseyside conurbations.

These figures of the actual movement and shift of population over the past 25 years are difficult to tie up with current policy. The London Administrative County, for instance, has lost 23.8 per cent of her population. She is now, at 3¼ million people, below the ideal size postulated under the Plan. Yet she reiterates the need for homes for 400,000 overspill, outside the county.

Salford County Borough has declined by 20.3 per cent and Manchester by 8.2 per cent, yet between them they demand the removal of a further 300,000 people (together with industry) to new towns or country towns preferably in the Cheshire rural areas.

Here is the paradox:

(1) Five of the six great industrial areas are apparently static or declining.

(2) Population and industry are drifting anyway to the agricultural counties in the middle and south of England.

(3) The Government policy of decentralization appears to have been already implemented.

How then can further and more drastic decentralization of people and industry into rural areas be justified?

Let us look more closely at these old industrial areas:

1. They are founded on heavy industry—on coal, iron, steel, shipbuilding—which *cannot* be shifted. They employ large numbers of workpeople and are peculiarly vulnerable in times of industrial depression. Indeed, it might well be argued, even in these post-war boom-years, that four of them seem more likely to bleed than to choke to death.
2. The areas have a low over-all density. They are crowded only in pockets. **(See Table 2.)**

How *can* there be overspill from industrial areas on these figures? A rearrangement of people within existing boundaries seems logical, humanly desirable and economical. But that suggestion brings one to density. What *do* 'overall densities' to the acre actually mean in terms of healthy, pleasant towns and homes?

In 'The Density of Residential Areas

TABLE 2: THE FALLACY OF OVERCROWDED CONURBATIONS

THE CONURBATIONS

AVERAGE DENSITY (PERSONS PER ACRE), 1951 CENSUS

(*a*) **TYNESIDE.**—Composed of 13 towns averaging 14.4 ppa.

Highest.		Lowest.
3 over 20 ppa.		**5 under 10 ppa.**
Newcastle C.B.	26.3	Of which 3 were under
*Gateshead C.B.	25.7	5 ppa.
*South Shields C.B.	21.8	

It is estimated that over 10,000 acres of land are derelict in Northumberland and Durham.

(*b*) **S.E. LANCASHIRE**—Composed of 53 towns averaging 9.9 persons per acre.

4 over 20 ppa.		**34 under 10 ppa.**
*Salford C.B.	34.2	Of which 20 were under
Droylsden U.D.	26.1	5 ppa.
*Manchester C.B.	25.8	
*Oldham C.B.	22.7	

(*c*) **MERSEYSIDE.**—Composed of 12 towns averaging 14.5 ppa.

3 over 20 ppa.		**5 under 10 ppa.**
*Liverpool C.B.	28.8	Of which 4 were under
Litherland U.D.	27.1	5 ppa.
Bootle C.B.	24.3	

It is estimated that well over 15,000 acres of land are derelict in Lancashire and Cheshire.

(*d*) **WEST YORKSHIRE.**—Composed of 33 towns averaging 5.5 ppa.

0 over 20 ppa.	**28 under 10 ppa.**
The highest is	Of which 21 were under
Shipley U.D. with 14.9 ppa.	5 ppa.

It is estimated that well over 9,000 acres of land are derelict in this conurbation.

(*e*) **WEST MIDLANDS.**—Composed of 24 towns averaging 13 ppa.

2 over 20 ppa.		**10 under 10 ppa.**
*Smethwick C.B.	30.6	Of which 5 were under
Birmingham C.B.	21.7	5 ppa.

It is estimated that some 10,000 acres of land are derelict within this area.

N.B.—*These towns declined substantially between 1931 and 1951, and again from 1951 to 1955.

Handbook (1952)' para. 78, it is considered that a town of 50,000 people, after allowing 100 acres for central civic use, 50 acres for 'large establishments', and 'land for all other uses to reasonably generous standards', could assume that 50 persons to the acre was a good *gross* residential density, giving an *overall* town-density of about 22 persons to the acre.

Yet the 14 New Towns, each intended for some 50,000 inhabitants, will ultimately average only 13–14 persons per acre overall. And of the 157 towns and cities in England and Wales which have 50,000 citizens and over **only 26 in the whole of the country, outside the London Administrative County,** *have* **an overall density of more than 22 persons to the acre!** They are:—

TABLE 3: THE FALLACY OF OVER-CROWDED TOWNS

	Overall persons per acre.
In the Greater London Area (15)	
Tottenham M.B.	42.1
Leyton M.B.	40.5
Willesden M.B.	38.7
West Ham C.B.	36.4
East Ham C.B.	36.3
Hornsey M.B.	34.1
Penge (Kent) U.D. ...	32.5
Wood Green M.B. ...	32.5
Acton M.B.	29.0
Kingston-on-Thames M.B.	28.5
Walthamstow M.B. ...	27.8
Edmonton M.B.	26.7
Brentford & Chiswick M.B.	25.4
Merton & Morden U.D. ...	23.0
Mitcham C.B.	22.9
In S.E. Lancashire and Merseyside (7)	
Salford C.B.	34.2
Liverpool C.B.	28.8
Litherland U.D.	27.1
Droylsden U.D.	26.1
Manchester C.B.	25.8
Bootle C.B.	24.3
Oldham C.B.	22.7
Elsewhere (4)	
Smethwick C.B.	30.6
Newcastle-upon-Tyne C.B.	26.3
Gateshead C.B.	25.7
Portsmouth C.B.	25.2

13 more towns had over 20 (but under 22) persons to the acre overall. These are :—

In the Greater London Area (7)	
Ilford M.B.	21.9
Friern Barnet U.D. ...	21.7
Southall M.B.	21.4
Ealing M.B.	21.3
Wembley M.B.	20.8
Barking M.B.	20.2
Finchley M.B.	20.1
Elsewhere (6)	
South Shields C.B. ...	21.8
Birmingham C.B. ...	21.7
Kingston on Hull C.B. ...	21.2
Sunderland C.B.	21.2
Preston C.B.	21.0
Middlesbrough C.B. ...	20.6

Such cities as Leeds, Sheffield, Bristol, Derby, Leicester, Southampton, with enormous 'overspill' programmes, have only 13.1, 12.9, 16.7, 17.4, 16.7, 19.4 people to the acre respectively.

Of the 'crowded' towns listed above the following increased their boundaries substantially between 1931–51 :—

TABLE 4: LAND-GRAB

Birmingham gained	7,546 acres.
Liverpool „	6,079 „
Ealing „	5,837 „
Manchester „	5,565 „
Sunderland „	5,213 „
Hull „	5,049 „
Middlesbrough „	2,972 „
Newcastle-on-Tyne gained	2,642 „
South Shields „	2,475 „
Wembley „	1,726 „
Preston „	1,717 „
Gateshead „	1,338 „
Portsmouth „	1,258 „
Bootle „	1,110 „

It is both interesting and instructive to see how five of these cities have used their new land, illustrating the results of land-wasting, low-density development which has been official policy since 1919. **(See Table 5.)**

These extremes of density between the inner and outer wards, the old and the new development, are universal. Yet the Minister of Housing and Local Government said on July 9, 1956, 'The shortage of land is the practical problem of congestion. The big cities are bursting at the seams. They are short of land for almost everything.'

Indeed, a conservative estimate of overspill over 20 years from the large conurbations and large county boroughs is as follows:—

TABLE 6: . . . AND HAVING IT

Conurbations	Est. Overspill of Pop.	Est. No. of Dwellings
London	472,100	147,500
Birmingham ...	203,600	63,600
Glasgow	300,000	93,800
Leeds	36,750	11,500
Liverpool ...	112,200	35,000
Manchester ...	226,650	70,800
Newcastle-on-Tyne	76,900	24,000
Sheffield	83,600	26,100
South Wales ...	35,000	11,000
County Boroughs :		
Bristol	51,200	16,000
Derby	24,300	7,900
Kingston-upon-Hull	26,000	8,130
Leicester	60,500	18,900
Middlesbrough ...	25,300	8,000
Portsmouth ...	40,000	12,500
Southampton ...	21,500	6,700

TABLE 5: EATING YOUR CAKE . . .

BIRMINGHAM at the 1951 Census had 1,112,605 people on 51,147 acres, averaging 21.7 persons to the acre overall. Of its 38 wards **22** wards had **18,140** acres for **626,360** people, averaging **34.5** ppa. **16** wards had **33,017** acres for **486,325** people, averaging **14.7** ppa.; i.e., **15,867 more acres for 140,035 fewer people.**

Had these 16 wards been developed at only 20 ppa overall, 173,815 more people could have been housed and the 22 crowded wards been reduced to 24.9 persons per acre overall.

This city estimates its overspill at 203,600, requiring 63,600 more dwellings. **How many more acres will they take, and where?**

LIVERPOOL at the 1951 Census had 788,699 people on 27,356 acres, averaging 28.8 persons per acre overall. Of its 40 wards **28** wards had **11,428** acres for **585,680** people, averaging **51.2** ppa. **12** wards had **15,928** acres for **202,979** people, averaging **12.7** ppa., i.e., **4,500 more acres for 382,701 fewer people.**

Had those 12 wards been developed at only 20 people to the acre overall, 115,581 more people could have lived there and the 28 crowded wards reduced to 41 persons per acre overall.

In 9 of these 28 central wards, the percentage of grossly overcrowded people (over 2 persons to a room) exceeded 10 per cent—in four of them it was over 20 per cent.

This city estimates its overspill at 112,200 persons, needing 35,000 dwellings. **How many acres will they take, and where?**

MANCHESTER at the 1951 Census had 699,000 people on 27,255 acres, averaging 25.65 persons per acre overall. Of its 36 wards **28** wards had **14,294** acres for **516,236** people, averaging **36.1** ppa., **8** wards had **12,961** acres for **182,764** people, averaging **14.1** ppa overall, i.e., **1,333 more acres for 333,472 fewer people.**

Had those 8 wards been developed at an overall average density of only 20 ppa 76,456 more people could have lived there, and the 28 crowded wards reduced to 30.7 ppa overall.

This city estimates its overspill at 226,650, needing 70,800 homes. **How many acres will they take, and where?**

SUNDERLAND at the 1951 Census had 181,524 people on 8,575 acres, averaging 21.2 ppa overall. Of its 18 wards **14** inner wards had **4,599** acres for **145,775** people, averaging **31.7** ppa. **4** outer wards had **3,976** acres for **35,749** people, averaging **9** ppa overall; i.e., **623 fewer acres for 110,026 fewer people.**

Had those four wards been developed at only 20 ppa overall, 43,771 more people could have been housed, and the 14 wards would have been reduced to 22.1 ppa overall.

This city estimates its overspill at about 15,000 persons, needing 5,000 dwellings.

HULL at the 1951 Census had 299,105 people on 14,360 acres, averaging 20.8 ppa overall. Of its 21 wards, **14** wards had **6,635** acres for **212,402** people, averaging **32** ppa overall, **7** wards had **7,725** acres for **86,705** people, averaging **11.2** ppa overall; i.e., **1,090 more acres for 125,699 fewer people.**

Had those 7 wards been developed at only 20 ppa overall, 67,797 more people could have been housed, and the density of the 14 crowded wards reduced to 21.8 ppa.

This city estimates its overspill at 26,000 people, needing 8,130 dwellings. **How many acres will they take, and where?**

Table 6 merely indicates the highspots of the programme of decentralization and change which is contemplated. These half-million families must all be 'received' by some market town or village and, under the subsidy inducements, many will be housed in flats in order to save land. The change in the appearance and the quality of life which this policy implies, its impersonality, its cost, its human implications, take a layman's breath away. How does it tie up with densities within the conurbations? within each town? with the trend of industry in slumps as well as booms? It is urgent and important to understand what we are doing, before we irrevocably destroy so much of value, before we treat England as an immense pudding to be stirred vigorously by every Government Department in turn, and the English people as rootless displaced persons to be 'directed' here or there, without clear proof of its necessity.

What standards have in fact been used to justify such large scale disturbance of settled communities? If urban life is to have any significance, we must surely accept some yardstick by which expansionist schemes can be measured.

For, just as the *over-all* density of English towns is rarely as high as 22 people to the acre, so is the *gross* density rarely 50 people—as a glance at the conurbation breakdowns shows. But, assuming that these densities within a town will give good living conditions, what should be the density of residential neighbourhoods?

To quote again from the 'Density of Residential Areas Handbook' (1952):—

> 'The absolute maximum density for two-storey terrace-houses is about 105 rooms per residential acre, secured by arranging terraces in close rows 70 ft. apart and . . . few people would disagree that it is an extremely monotonous layout. Introducing minimum variety into layout (i.e., culs-de-sac) with small incidental open space (roughly 1 acre per 1,000 rooms) but retaining 70 ft. spacing between the rows, reduces the density to 72 rooms per acre. Enlarging the back gardens to 50 ft. (i.e., 100 ft. between the backs of houses) reduces the density to 65 rooms per acre. This last figure might be regarded as a practical working standard, though it should be remembered that higher figures are possible if minimum gardens are acceptable. . . . Densities for corresponding three-storey terrace-houses are roughly 135, 95 and 85 rooms per acre respectively.'
>
> 'The maximum possible densities for flats vary from about 120 rooms per residential acre for low blocks to about 180 rooms per acre for taller, longer blocks . . . or, depending on a number of variables, from 200–300 rooms per acre.'

For practical purposes 'rooms per acre' can be taken as 'persons per acre'.

I suggest that two further factors should be taken into account. *First*, the neglect of *family* groupings weakens the conclusions, for 105 rooms may be 53 two-roomed dwellings for childless couples, or 18 six-roomed dwellings for parents each with four children—two very different problems needing very different solutions. *Second*, the neglect of the square, the crescent, the circus and the short terrace as part of the traditional high-density house-grouping in urban England, which gives that rhythmic subtlety of design which is so satisfying in areas developed in this way, disguising their high urban density.

The estimated overspill and number of dwellings said to be required by each of the cities named above were based on an average family of 3.2 persons. In fact of course an average is the mean between two extremes, which may be close to or far from the average. Thus 3.2 may be the mean between a large number of two and of four-person families, or between a large number of two- and a smaller number of eight-person families. 'Housing' is profoundly influenced by this variation.

Since 1945, local authorities in England and Wales have concentrated on the three-bedroomed house (or two bed-and-box, as tenants say) and the two-bedroomed flat. Here are the actual figures for the period April 1, 1945, to December 31, 1955:—

Local authority building by number of bedrooms.

	1	2	3	4 or more	Total
Houses	31,823	252,320	855,517	32,443	1,172,103
Flats (inc. maisonettes)	68,381	135,334	43,053	4,958	251,726
	100,204	387,654	898,570	37,401	1,423,829

It will be seen that 80.9 per cent of all flats and 24.2 per cent of all houses are of one to three rooms, i.e., for small families or childless people, while the number of homes for large families is negligible.

Yet overcrowding is most acute, subsidized homes are most needed, by the large families. And when it is remembered that the few larger dwellings built within towns have been mainly flats—which are unpopular with and unsuited to large families — the urgency of reconsidering standards of residential neighbourhoods in terms of *rooms per family grouping* is even more apparent.

The balance which has swung so sharply against large-family houses within towns since 1919 must be redressed, and as a general principle it is always better to build for the extremes than for the mean. In fact, this may be the solution of the clearance of slums and the redevelopment of worn-out central areas without overspill, decanting, or decentralization. If estates were planned in terms of *family* groups needing houses and *non-family* groups needing flats, each group at the same density of *rooms*, though not of dwellings, to the acre, a new and lovely grouping would emerge and at a density considerably higher than that achieved today. An extreme example of this grouping is shown in some detail on page 426, compared with a typical example of modern lay-out and planning, on roughly the same acreage, for roughly the same number of people, but with very different amenities and results.

The Regent's Park Development for the Crown, built at the beginning of last century, left nearly 400 acres of the site as a beautifully planted park, concentrating its tall dwellings round it. These great terraces, readily accessible from main traffic routes at the back, were at a density of c.104 large rooms to the residential acre. Because the tenants often had also a country house, most of these houses had only small common gardens, but they had the use of the magnificent park. They are the equivalent in height and scale of what we, today, would build as flats.

To the east of the estate were grouped in three squares and a number of short terraces the small family houses intended to suit the skilled workers and their families, who could easily find work within walking distance at the great houses to the west, as well as in the industrial area round the canal basin, which was part of the development. The houses were five to eight-roomed, with frontages from 12 ft. to 16 ft. and 30 ft. to 60 ft. private gardens behind most of them. The three squares were originally intended as markets, but were soon turned over to communal use by the tenants round them who planted, tended and used the squares themselves. These small urban family houses were at a density of 22 dwellings—132 rooms—to the residential acre.

Here in miniature is the answer to the whole problem. True urban redevelopment makes unnecessary both sprawl and overspill (which is only sprawl-gone-somewhere-else). And the right sort of urban redevelopment means a New Deal for town dwellers. Flats for big families in towns provide companionship but no privacy (or children's breathing space): cottages on the outskirts provide (sometimes) privacy, but no companionship, remote alike from work and play. But the mixture, in the town, of flats for those who want them (the childless, the single people, the old couples) and taut terrace housing for the families, can achieve both—and may even, as in Regent's Park, give a terrific bonus in the form of one of the finest town parks in the world.

In short, we are trying to tackle today's problems with pre-war figures, and pre-war town-hating attitudes of mind. It is time for a new look and some new solutions.

A PLAN FOR PLANNING

1. *As things are going at present, the very best we can hope for is that a rural county (with a good planning officer and a lot of luck in being out of the way of urban sprawl or interference by government departments) will get no worse than it is at the moment.*

2. *That is to say, the best we can do is what ought to have been guaranteed automatically by the planning system. More than that—i.e., positive planning—is almost unknown in Britain, not because of lack of enthusiasm or ability, but simply because the planners have no time left over from trying to plug the leaks in a system which is as full of holes as a sieve.*

3. *The first thing is to build an effective system: a framework under which, even if nobody shows any imagination, things will get no worse. Only then can positive planning be used to clad it.*

4. *The ultimate object of positive planning is to preserve and intensify the sense of place: the difference between integrating the result of a planning application* into *the landscape and putting it down* on *the landscape.*

5. *We can't be schizophrenic about living in towns and wanting to preserve the countryside. In a country as small as Britain, town and country can't be separate concepts that you can develop independently. The only real guarantee of unspoilt countryside is a set of tightly planned towns: and, conversely, a green countryside that can be made to stay green is a guarantee that our towns will be properly redeveloped. But you can't eat your countryside and have it.*

THE FRAME

Stage 1

1. The first step is to give a safeguard to ordinary countryside. At present there is none: outside areas of 'special landscape interest' or the London Green Belt (a pre-war idea) agricultural land is coloured white on the development plans—neither scheduled nor unscheduled, just open to any application (or to repeated applications after refusal). Where there ought to have been the clearest direction of all there is a vacuum; consequently the local officers are continually fighting a flood of applications which prevents them from getting down to real planning.

2. The Minister is proposing Green Belts for other towns besides London: but as a check to sprawl these will be almost useless. The London Green Belt has stayed more or less green, but sprawl goes on unchecked **beyond** it, around Redhill or Slough or St. Albans.

3. The only solution is to make **all** agricultural land into 'Green Belt' land. We are coming round to this anyway: why wait until diluted sprawl has spread a hundred miles around London, Birmingham and Merseyside? In the 'white land' on the development plans there is a practicable working boundary, for the towns have already carved out their estimated housing needs for the next twenty years. There will be no immediate distress: there will be a need for the towns to plan their housing tightly (see particularly pages 423-426) and there will at last be a point where one can clearly say 'that's enough.'

Stage 2

1. That is one dimension in the frame. The second is to ensure that every change which will affect the landscape does in fact go through the planning machinery.

2. For if the planning system has a vacuum at its centre, it has also been set up in a wind tunnel. The last ten years has seen a gale of runway extensions, transformer stations, ordnance depots, grid lines, government housing estates, sewage works and water works. Not one of them needed planning consent.

Government Departments

3. First, the Crown as a general principle of law need give no account of its actions. 'The Crown' includes, unhappily, the three Services, the Ministries of Fuel and Power, Works, Supply, and Transport, the G.P.O, the Central Electricity Authority and the Atomic Energy Authority: enough to account for at least thirty per cent of the examples in *Outrage.*

4. That these bodies shelter under 'The Crown' is an absurd anomaly resulting from the days when Crown property meant land owned and used by the Royal Family. Obviously we do not wish this to come under planning control. (In fact, of course, there is no need, for Sandringham and Windsor Great Park are among the neatest and trimmest estates in England.)

5. At the moment, local (not national) planning officers are graciously 'consulted' when plans are cut and dried, and in some cases required to give an answer within fourteen days: opposition in these circumstances is rather like David fighting a Goliath who has built into the rules a clause saying that he can confiscate the sling (with a gruff shout of 'in the national interest') whenever things become difficult.

6. We therefore propose compulsory consultations, ministry to ministry, for all the 'Civil Service' Crown

bodies, to settle the basic details against a national development plan (another thing we haven't got, see page 433) so that big changes can be made while plans are still elastic.

7. When the site has been narrowed down to one county, the local authority should be called in: and when the site has been agreed there should be formal application so that a planting scheme (carried out by a reorganized Forestry Commission, see page 435) can be imposed and enforced as a condition of consent.

8. The derelict camps which are in the uneasy guardianship of the Ministry of Works should be put back where they belong—with the Services; and their clearance could well be made part of routine Royal Engineers' training. Ironically and typically, there are Territorial Sappers who would be glad of the chance to blow something up!

Permitted Development

9. A disastrous 'experiment in freedom' was made in 1950 by which a whole range of development was gaily released from planning control altogether. It is enumerated below[1] and divides into two classes: pure loopholes (significantly, all for official bodies) and minutiae—small things, but ones which can materially affect the landscape.

10. The loopholes should simply be brought back within planning jurisdiction, and nearly every planning officer in the country would be glad to see them there.

11. For the minutiae we propose a shortened form of application—i.e. simply by letter stating what is proposed. The planning officer can call for a full application if he thinks it is required; no reply within fourteen days being construed as permission. (Just this form of application is already used for farm buildings in areas of 'special landscape interest'.)

Stage 3

1. We now have, first, the fundamental planning aim and, second, the means to apply it to every projected alteration in the landscape. Thirdly, we must ensure that the administrative machinery is coherent enough to carry through a national plan.[2]

2. At the moment it is not, and its weakest link is where the threat is strongest. The basic planning authorities in Great Britain are the counties **and** the county boroughs. This means, for example, that there are fifteen independent planning authorities in South Lancashire. So all hope of truly regional planning is doomed from the start in the parts of Britain which most need regional plans.

3. The difficulty is not just administrative. County boroughs have a vested interest in sprawl: more land means more prestige, more housing on that land means more ratepayers. The more land they can grab, the less is the incentive to redevelop the town centres properly; so the towns decay and the countryside is destroyed simultaneously. We have a new meaning for the term 'rotten borough.'

4. County boroughs already control a lot of countryside grabbed between the wars. They could augment their boundaries almost at will, either by application to the Ministry or by private bills whipped through an apathetic parliament. (Stopped for the moment while the commission on boundaries is sitting. As it is likely to recommend many more county boroughs, the remedy looks like being worse.)

5. Once countryside is inside the borough boundary it is out of anyone else's control. By and large the planning officer is either unqualified, uninterested or subordinate, rubber-stamps the housing application and another bit of legal sprawl is created. This is just what has happened at Brighton (see ARCHITECTURAL REVIEW, Oct., 1955). The saddest places in England are the old villages caught on the wrong side of the borough boundary and then swamped.

6. All this is also true, to a lesser extent, of all the municipal boroughs and U.D.C.s: here the county council can (and is almost expected to) delegate some or all of its powers to the local councils. Some counties don't, like the Yorks N.R., and are noticeably the better for it: some counties have apparently delegated all their powers, like Staffs and Beds, making any coherent plan almost an impossibility.

7. The cure for this is **first**, that the county must have the right of veto over the basic land use inside the county boroughs,[3] and a right of veto on all powers delegated to the district councils and municipal boroughs.

8. Second, the adoption of the principle of 'no delegation without qualifications'—i.e., no delegated powers unless the authority is prepared to pay a full-time planning officer who isn't doubling with another post (because planning a borough is a full-time job), who isn't subordinate to some other borough official, and who holds visual qualifications (T.P.I. or R.I.B.A.).

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[1] *Statutory Instrument No.* 728, 1950, *First Schedule.*

a. Loopholes:

Class 7: forestry buildings and works.

Class 12: specific development under local or private Acts of Parliament (i.e. if an authority can slip through a private bill, almost any specific outrage can be committed).

Class 13: ancillary buildings and 'lamp standards, information kiosks, passenger shelters, public shelters and seats, telephone boxes, fire alarms, public drinking fountains, horse-troughs, refuse bins, barriers for the control of persons waiting to enter public vehicles and similar structures or works.'
The lot: an anatomy of street furniture.

Class 14: local highway works for road improvement on land *outside* boundary of the road.

Class 18: statutory undertakers:
c: water-hydraulic power and undertakings: plant and machinery under 50 ft. high and all ancillaries.
d: Gas undertakings: plant and machinery under 50 ft. high, governor houses up to 600 cu. ft. and all ancillaries.
e: Electricity undertakings: transformer stations under 1,000 cu. ft., machinery under 50 ft. high and all ancillaries (including power lines).
f: Road transport undertakings: overhead wires, huts, stop posts, signs, barriers.

Class 20: National Coal Board buildings: permission to be obtained but authority shall not refuse permission *or impose conditions* unless satisfied that building materially affects amenity or could be resited. (This safeguard looks as though it would be worthless in practice.)

b. Minutiae:

Class 2: gates, fences and walls up to 4 ft. high at a roadside; 7 ft. elsewhere.

Class 5: use of land by recreational organizations (which can produce the squalor shown in ARCHITECTURAL REVIEW, Sept., 1955, page 190).

Class 8ii, 13ii, 20ii: deposit of { industrial waste / local authority refuse / coal slag } on existing sites, *whether or not* superficial area is extended.

[2] The basic trouble is the tying down of planning to local government *as long as* local government itself is tied down to be a cut-rate, cut-intelligence mirror of national politics. But that is hardly included in our present brief.

[3] This would obviously be achieved anyway by freezing the 'white land' on the development plans which we have stated as the basic step: but we wish to formulate a policy in which each section could if necessary be applied by itself and still be an improvement on the existing situation.

THE CLADDING

1. National Administration

1. The first step towards positive planning is to have a plan. A good solid platitude, but a national plan is just what we haven't got: and, as Sir Patrick Abercrombie recently pointed out, we haven't even got a set of regional plans.

2. What we have (or will have when Denbigh and Glamorgan part 2 are submitted) is a library-full of separate development plans—148 of them. A national plan only exists as the arithmetical sum of this library-full.

3. In the countryside, where there is urgent need for a plan (before there ceases to be any countryside) and where there is general agreement on what to do, the development plans are little more than a vast accumulation of statistics.

4. In the towns, where planning needs to be flexible (unless you intend to employ an astrologer to forecast industrial trends) and where realization of what a town **is** has only been rediscovered in the last ten years, there are fearfully precise plans for redevelopment and, usually, obliteration.

5. In neither case is there any direct relation to the look of things: hardly a drawing in all the plans from Anglesey C.C. to the County Borough of York. There's a close relation to the byelaws and the sociological standards: no relation to the result in three dimensions, and not much relation to the people who are being planned.

6. All the plans need reworking in visual terms: but most of all we need a national development plan, to make sense of the piles of unrelated statistics.

7. This is the job of the Ministry: and at present it is revoking its primary function by treating appearance as a matter of taste and therefore of opinion. This is equivalent to the Treasury refusing to exercise financial control on the grounds that our economic system was based on laissez-faire. The setting up of a green belt is in itself a fundamental act of taste—preferring open countryside to unchecked sprawl.

8. Instead of realizing that there are common sense visual rules (we have set them out on pages 355–358) and adhering to them, it has created a set of wordy abstractions in lieu—like 'not in conformity with existing development'—which are much harder to work to than the visual rules would be, and in addition induce frustration in both planned and planners (who in practice have to use the visual rules and are then forced to disguise them in jargon afterwards).

9. We suggest therefore a team of expert planners and architects inside the Ministry of Housing free of administrative ties (just like that inside the Ministry of Education). Their fundamental job will be to teach the civil service to think visually,[4] and to reword all the planning legislation: but the most urgent task is to produce a national plan making sense of the development plans, establish acceptable sites for airfields, power stations, afforestation.

10. In conjunction with compulsory application to the Ministers that we are proposing for Government departments (page 432), this will mean that the Ministry would have ready a set of alternative sites, or proposals for better use of existing facilities.

11. In a recent example—the supergrid from Burton-on-Trent to Fleet—this would have meant agreed siting at an early stage instead of a piecemeal fight by each county against the Central Electricity Authority, which has acted throughout with a maximum of ambiguity and curtness.

12. Hand in hand with this goes the need for regional planning of tricky areas like the Tyne, Lancashire-Cheshire, and Greater London. This means effective co-ordination between authorities, rather than a separate organization: it could be done by one man with a fighting temperament, effective ministerial backing and an effective plan to work on.

13. In the foregoing we are censuring the Ministry, not the present Minister. From the outside, the two creative proposals made recently have both been due to his personal intervention: provincial Green Belts and the Oxford relief road. 'There's plenty of creative work going on at the Ministry' was said complacently after this year's T.P.I. conference. Maybe, but there's little enough evidence of it Out There.

2. Local Administration

1. With the national and regional plans settled and with the juggernauts brought under effective control, the local planning officer can go to work. With all the basic decisions taken, he can switch from being a mixture of rubber stamp and wicked uncle to being positive: i.e., asking for development, not refusing it.

2. His first job is a microcosm of the national plan: in the town a list of all the vacant lots, derelict sites, unused strips of ground; in the country, of gaps in villages; in the suburb, of undeveloped plots. At the same time he can evaluate suitable conditions of consent for each.

3. He can also publish and display as widely as possible the areas where building is prohibited, together with the reason—that it is saving the countryside for all to enjoy, from all who want to despoil it—without fear or favour to private person or public body. At the moment, such wording would be a mockery: inside the framework we have already suggested it would represent the exact truth. And it is a truth which everyone would support—at least in the abstract.

4. Armed with these two weapons he can meet any developer half way and say 'I have this list of sites; would you like to build on one?': acting as a comprehensive official estate agent, or a local land exchange.

5. At the same time, freezing the agricultural land will make such preliminary consultation a necessity for anyone wanting to build. It can be made the first stage in a planning application whilst remaining quite informal.

6. This stage should establish basic agreement, so that the mechanics of the actual form of application, which

[4] There's obviously a similar fundamental job to be done in the schools: one year to train the teachers and ten years to train the children: everyone agrees on this, so it should be started *now*, not remain as a pious hope which is already about thirty years old.

seem so unnecessary to the layman, can be slashed. One application and a sketch plan would be enough. This would remove the man-in-the-street's chief grievance against 'planning'.

3. Housing Problems

1. Overspill and decentralization[6] policy cannot be treated as a series of local agreements between authorities. They must be handled through a central Land Exchange—another job for the team inside the M.O.H.L.G. The basic decisions could almost be handled by one man.

2. Most towns are using overspill figures as a way out of undertaking proper urban redevelopment, and using decentralization as a means for legalized sprawl. Here's Birmingham's proposed list of reception towns —and remember, Birmingham is 20 miles across.

Town	*Present Population*	*Suggested Expansion*	*Distance from centre of Birmingham*	*Distance from outskirts (our figures)*
Redditch	29,000	15,000	13 miles	5 miles
Bromsgrove	28,000	12,000	13 ,,	3 ,,
Malvern	21,500	10,000	35 ,,	25 ,,
Lichfield	11,000	10,000	16 ,,	4 ,,
Tamworth	13,000	10,000	13 ,,	5 ,,
Rugeley	8,500	5,000	22 ,,	10 ,,
Cannock	41,000	10,000	17 ,,	continuous building

In fact, Birmingham isn't even bothering to decentralize to the towns:

> 'Mr. Moss asked the Minister of Housing and Local Government what local authorities in Warwickshire had made a contribution to the Birmingham overspill problem by agreeing to municipal houses being built in their areas by Birmingham Corporation. Mr. Duncan Sandys, replying on June 12, said—The Meriden Rural District Council have agreed to the Birmingham Corporation building in their area. In addition, the Corporation are considering proposals made by the Tamworth and Atherstone Rural District Councils....'

This is just sending subtopia galloping across the country with everyone's blessing—until the countryside finally disappears.

3a. Overspill

1. The present overspill figures—estimates 20 years ahead for a population based on a uniform family size —are a statistical chimera, and a slump or boom would quickly prove it. Yet they are being worked to and accepted unconditionally. You cannot build for a given population—you can only build a certain number of dwellings. At one end, if you decant London it will only fill up again because it is a magnet: at the other, if you decant the industrial towns of the North you will find yourself at the end with a square mile of waste land and nothing to put in it.

2. The figures on page 428 show that there are very few overcrowded boroughs as a whole, but pockets of congestion in each. The only effective overspill figures are therefore the surplus left over after you redevelop these pockets to a humane standard. The examples on pages 423–426 show how high a density this humane standard can give. Up to a maximum of at least 70 p.p.a. it isn't the density that is the determining factor, but how you achieve it.

[6] The real place for decentralization and for the New Towns, financially aided, is the Commonwealth; but that is way outside our present scope. We can't examine it here, but we wish the Government would.

3. The figures also prove that the land squandering of the towns themselves, in their earlier housing, is largely responsible for their present troubles. Another cure is therefore to increase the density (and the urbanity) of the 'thirties estates: a solution which has hardly entered the heads of the towns in their feverish search for building sites. The ARCHITECTURAL REVIEW will do a pilot study to that end of one of the emptiest of these estates this year.

4. Only then should an overspill proposal be taken to the Land Exchange, who should be able to call for redevelopment plans to support the figures.

3b. Redevelopment

1. Redevelopment itself treats the family as an average unit of 3·6 people and the urban population as a collection of ping-pong balls, to be bandied about the borough or county (or country) at will. There is an ocean of abstract sociology and no humanity at all.

2. Every town has many sites waiting to be redeveloped at any one time and all towns have vacant sites. Sites should be paired so that the inhabitants of site A can be moved all together a few streets away into the houses on site B (built on the vacant land) and so on. But it needs co-ordination, not a mad piecemeal effort.

3. Using this technique the inhabitants of a clearance area could be treated as humans, not statistical fodder. The estate they move into could be planned to have the exact proportion of flats : maisonettes : small houses: large houses. Moves would be measured in yards, not miles.

4. In any case, to build uniform housing for a 3·6-person family is daft: it leads either to uniform flats or uniform houses. It leads to over-use of some units (hence overcrowding and future overspill) and under-use of others. If you build for the mean and the extremes, in correct proportions for each you will have the socially correct solution, the most economical, and, as a bonus, the best looking as well.

5. Build flats for those who want flats: the elderly, the childless, the pure urbanites. Small terrace houses with small gardens for small families, taller terrace houses and bigger gardens for bigger families. Not a rule of thumb to fit somebody's byelaws, but a humane environment for people. Keep these in the pattern of the town by taut planning and cutting out wasted space—again, not to somebody's byelaws, but to the needs of each particular site.

3c. Decentralization

1. There will be a small residue left over from slum clearance and proper redevelopment in every town. There will be a perennial overspill from London, possibly from Birmingham and Liverpool, the other magnets for immigrant labour. Assuming a Land Exchange takes charge of the whole problem, where are they to go?

2. **Not** on to first-class agricultural land like the present expansions of Swindon and Bletchley.

3. **Not** to balanced (and beautiful) country market towns like the proposed blowing up of Huntingdon and Bury St. Edmunds.

4. Not to towns where anyone can commute back to the parent if they want to (see Birmingham proposals; also the New Towns and London's suggested expansion of Letchworth, Aylesbury, and Wokingham).

5. Instead, bring balanced industry into the areas that are

(*a*) one-industry and susceptible to slump;
(*b*) with slum and derelict-land problems which would be transformed by outside financing;
(*c*) need tidying up anyway.

This means the industrial distressed areas of the 'thirties (which could easily become distressed again): Tyneside, South Wales, East Derbys., the lowland Scots coalfields, Oakengates-Shifnal, Charnwood Forest. This is both good landscape sense and good land-use sense—and could prove in the long run (e.g., a slump or the coal running out) to be economic salvation.

6. This must be done as a grafting, not a dumping operation—reclamation, clearance and infill going hand-in-hand, not 1,000-acre housing estates on agricultural land. The Government and the exporting authority have the money to finance what the receiving areas themselves could never do.

4. Commuting

1. If agricultural land is frozen the number of sites in open country available to commuters will be reduced by nine-tenths.

2. On the other hand, the rural population is static or declining, due to mechanization, and is largely rehoused, usually outside the village group. There are hundreds of empty cottages in every county: a dozen empty sites in every village.

3. Correlate these: channel the commuting pattern from a mass sprawl over the countryside into rehabilitation of the villages, by conversion and infill.

4. County planning offices should have available a list of such sites, and the grant scheme for cottage conversion should be operated from the Ministry through the county—not the borough or rural district, where one is at the mercy either of unco-ordinated byelaws or of boroughs like Burnley which just aren't interested.

5. Each site must have its conditions of consent carefully worked out to augment the village pattern, not explode it. This may mean terracing or walling or restrictions on siting, a legitimate price to ask for being allowed to build in a nice place in surroundings that are guaranteed to stay genuinely rural. The ARCHITECTURAL REVIEW will publish an article rehabilitating a set of gap-toothed villages in the Home Counties this year.

6. This is frankly an exurban pattern, but one which will augment the countryside, not destroy it. It visualizes road journeys of five to ten miles to a railhead and rail journeys of up to an hour therefrom: with road traffic in Greater London at saturation point this would take no longer than the trail up from Debden or Hounslow.

7. This provides the solution to those who really want to live in the countryside and are prepared to accept the countryside's terms. For those who are understandably in reaction against the flat at Woodberry Down or the furnished room at Earls Court, the answer lies in taut urban redevelopment and in full use of land in the existing suburbs.

5. Byelaws

1. Taut planning is often made impossible by out-of-date or irrational byelaws (see pages 409-422). They need a nation-wide overhaul and standardization, and continual review thereafter: another job for the M.O.H.L.G. team.

2. The most important thing is to ensure that the byelaws serve the environment, not—as usually happens today—the other way round.

6. Design Standards

1. The C.O.I.D. has done good work in establishing a minimum standard for lamp standards: but as is shown on page 393, that is not good enough. It is inevitable that the designs should be only a minimum, because the Council has to approve something, but manufacturers tend to regard approval as something final which precludes further effort. What is needed is a maximum standard which will be a true guarantee of quality.

2. This approval should carry a good fat inducement behind it in the shape of outline planning permission for approved designs.[6] Without inducements nothing can be done.

7. Design Control

1. This, frankly, has done far more good than harm. For every modern house lost to us there have been fifty horrors ameliorated.

2. We propose it should remain: if it were interpreted in terms of visual effect instead of administrative formulae (and in fact most local planning officers already do interpret it visually) the friction would disappear; for architect and planner would be talking the same language.

8. Afforestation

(This is a summary of the points contained in the article on pages 387–390.)

1. Abandonment of the present 5-million acre programme—ten per cent of our land surface, five times more than the Commission have planted already, seventy per cent of the forest acreage of British Columbia!

2. Reorganization of the Forestry Commission from being an autonomous body, out of reach of planning and public opinion, to become a part of the Ministry of Agriculture.

3. All planting schemes to be brought inside the planning network.

4. Return of existing schemes to agriculture as trees mature until the conifer acreage is at an acceptable level for an atomic-age country: an acreage which should be accommodated in two or three already spoilt areas—like Thetford Chase or some of the

[6] We are assuming that street furniture should require permission (see page 432).

Scots moors—and not spread over the whole country.

5. Surplus foresters reorganized as teams of specialist advisers at disposal of planning officers for carrying through details of planting schemes: at the same time a national camouflage corps and a cadre of down-to-earth landscape architects.

9. Financial Aid

1. Countryside preservation has oceans of goodwill but no cash. (For example, Lancs C.P.R.E. did fine fighting work last year on a *total* expenditure of £1,630! Think by contrast of the millions of pounds wasted yearly in the three Services alone; think on a lesser scale of the thousands of pounds spent on municipal rustic up and down the country.)

2. The government should be prepared (and industry might be induced) to spend some money each year. Even a 'Save the Countryside' flag day (as the Swiss have) would help. There, the proceeds have transformed their Heimat-Schutz from fighter of lost battles to a powerful body which has even managed to move a whole hotel from the top of the Rigi.

3. Just as the Historic Buildings Council gives aid to deserving houses, so this money should be given to deserving environments; towards the cost of specific schemes at set pieces of landscape and townscape (wires underground, intricate traffic solutions, non-standard furniture). It should also be used on model areas—a London borough, a county town, half a dozen parishes—which are made into living pattern-books showing the neatest techniques and furniture, the subtlest planting and the tautest planning.

Summing up: *This Plan for Planning is an attempt to translate the principles of the Visual A.B.C. (page 355) into administrative terms. To keep the categories of landscape separate a national Green Belt is essential. To minimize the clutter of verticals the chief mess-makers—i.e. the government departments and statutory undertakings—must be brought under planning control. The principle of economy and of cutting out land-waste means a complete rethinking of our housing policy; and the large scale use of camouflage to cover up what can't be resited needs a national camouflage corps to do it, hence our proposals for reorganisation of the Forestry Commission.*

But above everything else, it's what the result looks like that matters: not whether it's neat on paper, or makes a pleasant statistic at the council (or the cabinet) meeting. The planners' job is to be able to generalize in an age bedevilled by specialists: to make each mystique of technology or each political manœuvre come to terms with the landscape.

This book, a reprint of the December, 1956, Special Number of the ARCHITECTURAL REVIEW, is the sequel to Outrage, the book which showed what we are doing to the face of Britain in the name of 'progress,' 'amenity' and the 'national interest.' Its revelation of decaying towns, pock-marked countryside and anonymous suburbs shook the press to the extent of 1,100 column inches of special feature and review space, shattered the complacency of many, opened the eyes of many more; the word then coined to describe this squalid mess—subtopia—has become part of everyday speech.

The response to Outrage proved that there were plenty of people who recognized the mess and who were prepared to do something about it. What they lacked was ammunition: examples of the right way to do things; arguments to refute theories tossed about by the apostles of inertia to save themselves from the necessity of thinking; a common-sense vocabulary for things which are either dismissed as intangible or served up in woolly abstractions. This book provides all these; it is not a set of pious resolutions but a true counter-attack. If your worry is tree lopping, look at page 381; if badly designed lamp-posts, turn to the designs on page 393; if your housing estate looks like a desert, the reasons are given on page 409; if you want to know why planning doesn't stop subtopia, and how it could be reformed, see page 431. There are forty pages of photographs showing well-designed and well sited examples of every kind of object; at the beginning there is a simple four-point common-sense sequence for sane design which can be applied straight away to see what is wrong with any street—the one outside your window, for instance, or the one which contains your office or your pub. This sequence isn't high-flown or obscure; it can be understood in half an hour, and it is described on pages 355-360.

Here is the ammunition: will you finish the job?

12s. 6d. net

SOME OF THE 1,100 COLUMN INCHES OF PRESS COMMENT ON 'OUTRAGE' TO WHICH THIS BOOK IS A SEQUEL

It gives a salutary shock to see the new eyesores systematically recorded in *Outrage*, a special issue of the ARCHITECTURAL REVIEW. The REVIEW is attacking not merely the aesthetic myopia which afflicts public bodies quite as frequently as private developers. It is questioning the general tendency to build new town areas like thinly spread suburbs, destroying country without making town, creating gardens but not cities, a form of urban development plainly impracticable if it becomes the norm. **THE TIMES**

This is well worth the attention of anyone who cares about the good looks of England. It is more than a string of horrifying examples. There is an idea behind the itinerary. The point which the author wants to bring home is that towns ought to be urban and the country rural. **THE MANCHESTER GUARDIAN**

. . . Sameness can become a most virulent form of ugliness. If we are not shocked into recognising it in time, we shall ourselves become subtopians, sub-humans, no longer individuals but for ever members of a herd. **THE OBSERVER**

The current (June) number of the ARCHITECTURAL REVIEW is called 'Outrage,' and is the most damning illustrated indictment of concrete lamp standards, 'Keep Left' signs, municipal rockeries, chain-link fences, truncated trees, garish shop fronts, pretentious hoardings, wires, poles, pylons and ill-sited power stations, that has yet been published. I hope that it will go to every borough engineer and surveyor in this island, as well as to all Government departments. . . .

John Betjeman, in **THE SPECTATOR**

. . . this issue is to be published shortly in book form. If it does anything to remove control over design from well-meaning but uninspired surveyors and engineers it will be worth a thousand times its weight in concrete. **DAILY TELEGRAPH**

We are slowly strangling ourselves to death. 'By the end of the century,' says the ARCHITECTURAL REVIEW, 'Great Britain will consist of isolated oases of preserved monuments in a desert of wire, concrete roads, cosy plots and bungalows.' . . . The description has deliberately been pitched in a high key. We need to be startled out of our apathetic acceptance of the way in which civilisation is eating into our meagre reserves of countryside; we need someone to come and shake us by the shoulder, to ask where we are going.

NEWS CHRONICLE

The ARCHITECTURAL REVIEW has compiled a special protest number. . . . We support their protest. The public conscience should be aroused to stop this outrage. Already the mess is almost beyond repair. **DAILY HERALD**

If the suburban spread continues at its present speed we shall all be living in a fake-urban, fake-rural fake. 'The end of Southampton,' says the ARCHITECTURAL REVIEW, 'will look like the beginning of Carlisle; the parts in between will look like the end of Carlisle and the beginning of Southampton.' **DAILY MAIL**

. . . a devastating and appalling photographic indictment of the industrial disease that is ravaging the once lovely face of England. . . . If you value rural England, buy, beg, borrow or steal a copy of the June issue of the ARCHITECTURAL REVIEW. **DAILY MIRROR**

. . . 'Outrage' isn't just another wail of despair. It is a fighting manifesto ending with advice that, if applied, could lead to better things. **TIME AND TIDE**

AND NOW WHAT THE PRESS SAY ABOUT THE 'COUNTER-ATTACK' ISSUE OF THE ARCHITECTURAL REVIEW OF WHICH THIS BOOK IS A REPRINT

Counter-Attack . . . is devoted to showing how Britain can cut a way through the ever-tightening coils of apathy and helplessness that are stifling the urge for beauty as surely as the cocoons of wire, which symbolise the process, are destroying the actual appearance of the land. . . . It is a courageous and constructive manifesto.

COUNTRY LIFE

The ARCHITECTURAL REVIEW has returned to the attack on uglification it opened last year. Then its special number called *Outrage* raised a storm. The new one, *Counter-Attack*, will, I hope, do the same. This time the REVIEW illustrates both the diseases—misuse of land, a clutter of signs, botching in the New Towns—and the remedies. On inept planners and inert Ministries the blows fall fast and heavy. **DAILY TELEGRAPH**

The December number this year [of the ARCHITECTURAL REVIEW] is called *Counter-Attack* and puts forward positive proposals for the saving of what is left of England and clearing up that sort of needless 'street furniture' which could better be named 'street litter.'

John Betjeman in **THE SPECTATOR**

Counter-Attack, in which, in contrast to *Outrage* pointing the finger, it [the ARCHITECTURAL REVIEW] tries to offer ways of avoidance. Still a very angry document—with much justification—behind it all lies an immense amount of material well worthy of study by all who think that our towns matter. **BIRMINGHAM POST**

Outrage was only an indictment. It drew up the damning charge—and coined a new word, 'Subtopia,' for the degradation in which all boundaries are submerged. *Counter-Attack* is a carefully thought-out plan of action for getting us out of the mess, for restoring harmony and beauty to our harassed and ill-treated island.

Tom Hopkinson in **NEWS CHRONICLE**

Counter-Attack makes no claim to be a magic wand. All it says is that Subtopia is not inevitable if you don't want it that way, and that there is still time to fight back. But you can't fight without ammunition, without examples, and facts and figures. In a battle of this kind, where the fate of the British landscape is in the balance, . . . there is no substitute for the individual citizen with an alert eye, an informed mind, and a true love of his town or countryside. He (or more likely she) is the fieldworker upon whom success depends. In *Counter-Attack* we are all given a splendid weapon which deserves to be widely, ruthlessly and constructively used.

Sir Hugh Casson in **THE OBSERVER**

Now the ARCHITECTURAL REVIEW in its December number has returned to the battle with a plan for a counter-attack on subtopia. . . . The problem it tackles is to give the man in the street some visual training, one might say visual guts, to see what is wrong and to insist on something better. **OXFORD MAIL**

The ARCHITECTURAL REVIEW has done it again. As a sequel to its now famous *Outrage* number . . . it has this month come out with a counter-attack number, putting forward a positive and fresh policy for town and country planning.

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